

MANORAMA YEARBOOK 2002

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A New Direction

It is over a decade since India began to liberalise its economy. The market is elevated as the architect of investment decisions and globalisation is the order of the day. Palpable changes have begun to make a mark on our lives. It is time we took stock of the situation and tried to see where we stand. The cover story this year is, therefore, a review of the Indian economy with special emphasis on globalisation and its impact. The population factor vis-a-vis economic development is given special treatment in this study.

A number of new elements have been introduced in *Yearbook 2002*. A section on terminology (What is What), Bharat Darshan-100 tourist destinations in India, 101 alternative medicines, mythology, an enlarged GK section and a new look to the Sports section are among the chief attractions.

Special articles touch upon different areas of life: Technology careers in the 21st century, India's turbulent neighbourhood, Intellectual Property Rights, Anti-Dumping, Medicine in the new century, Indians Abroad, a Review of the year 2001, etc.

The regular sections have been retained, with new inputs in each. The popular quiz section presents Quiz 2002, with 1001 fresh questions and answers. The Science and IT sections give an insight into the latest in these areas. The Education and Career section contains a model question paper for candidates taking Civil Services examination.

The New York tragedy of Sept. 11 has changed the world. The Current Affairs section deals with every major development during the year under review.

Manorama Yearbook has continued to be on the best seller list for the seventh year in succession. The *Yearbook*, primarily intended to serve the information need of young men and women on the threshold of career options, has also become a ready reference companion for executives, researchers, teachers and all others seeking knowledge. What is more, it has been prescribed as a reference book for certain courses.

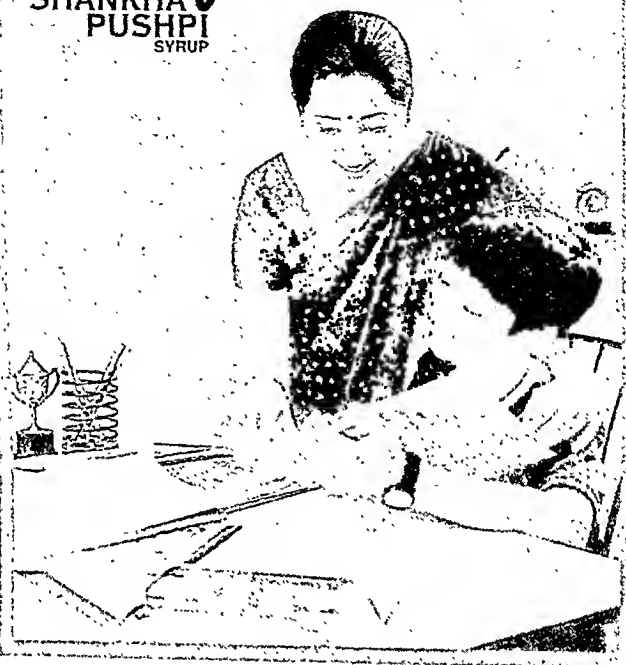
The *Yearbook* has been redesigned to make it more user-friendly. Readers will find the new typeface and its size, and the layout more pleasing.

I extend my thanks to all contributors, advertisers and well-wishers. Feedback from readers has always been a source of strength to us. Please let us have your suggestions.

A hearty welcome to the 37th edition of *Manorama Yearbook*. and best wishes.

Dabur

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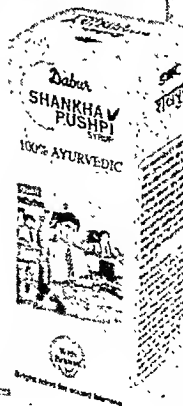


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26	Indian Economy- A New Dawn	72	World Trade Organisation
34	Agriculture	72	Indian Population
42	Industrial Scene	78	India's Economic Development and Population Growth
46	Foreign Trade		
48	External Sector		
62	Globalisation	84	Flags of Nations
64	Impact of Globalisation	86	Current Affairs: International
68	Global Institutional Framework	110	Current Affairs: National
68	International Financial Institutions	120	A Review of India 2001
60	Financing Targets for the Tenth Plan (2002-07)	176	Maria of Moon
132	Internet Domains	178	Adieu MIR
135	Internet Country Codes	183	A New Space Odyssey Blasts Off
136	Internet lingo	184	Forced Landing Exercise on Asteroid
138	Emoticons	187	Mythology of Lightning
143	Bluetooth Revolution	188	Types of Lightning
149	Data Beamers	189	Guidelines to be Followed During Thunderstorms
172	Solar Statistics	191	Earth Data
175	Planet Names		
175	Lunar Statistics		

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- 259 Nations of the World
360 UN: World's Peacemaker
366 International
Organisations
370 World Population Trends

- 371 World Religions
371 World Languages
373 Indians Abroad
378 India's Turbulent
Neighbourhood

- 316 Ravi Shankar Narayan
318 Co-faces on the Future
319 B. J. Rao's up in Arms
322 V. K. Rajwade
322 Long Term Studies
323 Chitra M. Mahalingam
325 The World's 100 Most
328 World's Best Cities
330 A. K. M. M. M. M.
331 Correlation and
332 A. K. M. M. M. M.
334 A. K. M. M. M. M.
335 A. K. M. M. M. M.
338 A. K. M. M. M. M.
339 A. K. M. M. M. M.
340 Population Statistics

- 342 A Chocolate-scented S
343 K. M. M. M. M.
344 Fuel Catches
345 Unveiling for Sex
346 Thailand
351 The A. K. M. M. M.
352 Laureate's Best Shoppers
352 Pet or Partner
355 English in America
356 The B. J. Rao's
362 Member States of the UN
364 Addresses of UN Officials
India
365 International Decades
366 UN Secretary-General
370 Central Asia Population
(Million)

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704	Athletics	730	2006 World Cup, Germany
710	World Athletic Meet, Edmonton	732	Futsal-football of the future
712	Cricket	736	Olympic Games
712	The Two Forms of Cricket	740	Asian Games at Pusan
716	Newsmakers of the Year	742	Chess
718	Snippets	744	Hockey
718	Records	745	Sports Miscellany
721	Ranji Trophy	750	Sports Tidbits
722	Tennis		
725	Career Graph of top Ten	752	The Exciting World of Hobbies
726	Football		
728	2002 World Cup in Asia		
684	Bid for a 'Clean State'	712	Record Partnership for each Wkt in Test
685	Special Category Status	712	Test Hat Tricks by Slow
687	A 'Baffle' Park	713	Harbhajan, Lawman in Record Books
690	Telemedicine	714	Test's Highest Innings Total
691	Women Judges	714	Indian Batting Record Pt
692	Golden Rice	714	Youngest Test Debut C
702	A Sister City in France	715	The Ashes
710	Nigeria Clocks World's Best Time in Marathon	715	One Day Partnership

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758	Calendar of Events 2001 World	814	Heads of Important Offices
780	Calendar of Events 2001 India	818	Obituary 2001
810	Council of Ministers	821	Stop Press
		824	Index

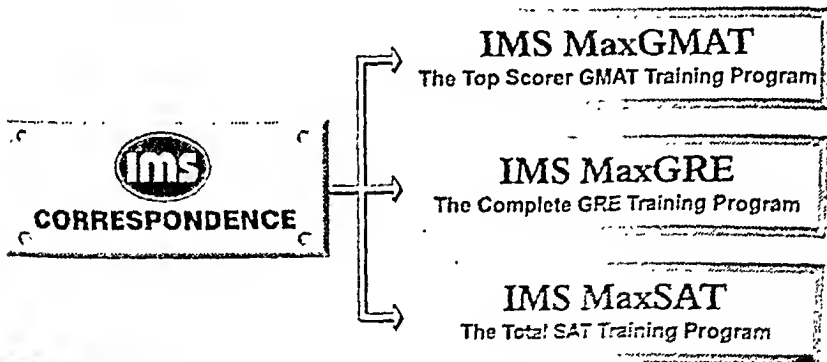
717	Sachin Figures in Bradman's 'Dream Team'	737	Olympic Games: Women Championships Records
717	Sachin's Landmarks in One Day	743	Koneru is No.1
718	Mohammad Ashraf	744	Junior World Cup
720-21	Cricket in the Family	745	Most Captains
722	Highest Individual Scores	746	Selected Sporting Couples
724	Love in Tennis	748	The National Sports Policy
724	32 Seeded Players	748	Triumph for Australia
725	Winner gets due after Six Decades	750	Did you know?
726	Milestones in Football History	752	The Gibbons
727	All-Time Football Records	753	Philately in India
728	Record Score in Football	754	Early Post
728	Zidane to Real Madrid	755	First Exhibition
74	Key Points of Futsal	755	A Million Post Offices
7	Olympic Games: Men Championships Records	756	First Indian Stamp
		756	The Classics

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Indian Economy - A New Dawn

S Sethuraman

Formerly Chief Editor, Press Trust of India

The Indian economy, having completed a decade of sustained growth at over six per cent, is structurally transformed, developing new strengths, to become a strong regional power in the early years of the new millennium.

Internationally, India, the world's largest democracy, is already regarded as an emerging economic power with potential to rank among the first five major nations of the 21st century. Even at an average of 6 to 6.5 per cent, India is one of the fastest growing economies of the world along with China.

To attain the coveted status, there is a long and difficult road ahead. A huge country of striking contrasts and cultural diversity, with over one billion people, needs effective governance, notwithstanding its well-established democratic system, the largest in the world, under a Constitution, which guarantees political freedom and rights of the individual.

With the second largest population, 16 per cent of the world's total, next to China, India confronts massive challenges of eradication of poverty and of ensuring full employment within the first two decades of the new century. More important, the State has to make itself solvent and generate resources to achieve universal literacy, health care for all, and provision of drinking water and other basic amenities to improve the quality of life of the people. Social indicators are among the lowest in the world. One-third of the world's poor are in India.

India's development record, with all-round impressive strides in economic and social development, has shown up serious weaknesses which have thwarted progress toward growth and reform with social equity. These include both the unsustainable fiscal deficits of the Centre and the States and grave failures of administration at all levels in delivering the services to the people.

Era of Liberalisation

Structural changes have followed the transformation of India in 1991 from a highly-regu-

lated and inward-oriented to an outward-looking economy in which the State dominance in most spheres of activity is giving way to private enterprise and contribution.

India has completed the first post-liberalisation decade with respectable growth rates, but without making visible impact on unemployment or social development. Growth has not begun endowing the State with revenue surpluses to invest in infrastructure, physical and social. Bridging huge revenue deficits through galloping borrowings, which have crossed the 100,000 crore mark, have characterised fiscal management in the latter half of the decade.

Overall, India has maintained macro-economic stability helped by good harvests, resurgence in manufacturing, and a robust growth in Services, outpacing the primary and secondary sectors. Policy reforms have opened up the economy, increased export competitiveness, and brought in investment and other capital flows from abroad. India's external vulnerability has been well maintained during the decade despite volatility in international financial markets, the Asian financial crisis (1997) with its contagious spread, and excessively high oil prices. With a low current account deficit, the balance of payments position has remained comfortable and the level of foreign exchange reserves has been steadily building up (45 billion dollars as on October 19, 2001 from 35 billion dollars a year ago). The rate of inflation has been contained at moderate levels while the rupee has come under pressure from time to time resulting in sizable depreciation from Rs 35.42 to the US dollar in 1996 to Rs 47 in 2001.

Structural Changes

India's economic strength is no doubt derived from agriculture with food self-sufficiency. But the growth of the economy is no longer as vulnerable to agricultural performance as in the past. The share of agriculture in GDP has been diminishing—by more than half since

independence—reflecting the diversification of the economy. Agriculture, however, is the most crucial sector as 70 per cent of people live on incomes from land. India has been having a succession of good monsoons for twelve years reducing the yearly fluctuations in foodgrain output.

Industry no longer shielded from external winds, has during the decade been attempting to restructure itself in ways that could help India to compete with the rest of the world. India has to catch up with even many of the developing countries in Asia in the development of manufactured exports.

What is of growing significance for the economy is the steady rise in the share of services, which now accounts for over 50 per cent of GDP. More recently, India's future has brightened with the breakthroughs in Information Technology (IT) sector and the proven skills of Indian professionals who are in demand in developed parts of the world. The IT-related services would give a tremendous boost to the economy in the years to come.

Sectoral shares of GDP at present are Agriculture (26 per cent), Industry (22 per cent) and Services (52 per cent). India is undergoing an Information Technology (IT) revolution, and has developed a universally-acclaimed software industry, which has become the fastest growing sector of the economy. India aspires to be a software superpower by 2008 with exports at 50 billion dollars, as compared to the current level of merchandise exports of 45 billion dollars. Future growth of the Indian economy will be driven largely by both the conventional services (Trade, Transport, Tourism, Financial and Community Services) and the IT-related services.

India's "old" economy has been performing below its potential unlike China which, in a span of 20 years, has made spectacular advances in output and trade to be reckoned as an Asian economic giant. There is, however, recognition that India, like China, is a source of stability for the world economy, because of its consistent growth records and pursuit of reforms in the direction of making the country internationally competitive.

In terms of trade and financial flows—hall marks of globalisation—India's share is still insignificant, in relation to China, but its potential for greater productivity and advances in the "New" economy are likely to push it

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forward to the ranks of the world's largest economies, next only to USA and China, by the middle of the Twenty-first Century, according to the World Bank assessment.

Challenges Ahead

Undoubtedly, poverty, though coming down slowly, is one of the most daunting challenges, with over 300 million in the 'absolute poor' category. Full employment, universal literacy, health care and raising the quality of life for all its citizens without discrimination, caste, creed and gender are equally formidable tasks to accomplish.

Statistically, higher growth translates itself into higher per capita incomes but as elsewhere in the developing world, there is no 'trickle down' to make an impact on the poor. Economic growth in India has not created the anticipated increase in employment opportunities and the country's planners are still groping for a job-creating high growth strategy. For a labour force growing by 2 to 2.5 per cent per annum, employment generation has been less than one per cent over the last decade.

The decade of 1990s opened with an unprecedented economic crisis which was turned into an opportunity to transit from an insular, import substituting to an outward-looking and export-oriented economy. The first flush of reforms (1991-94), focussed on the dismantling of controls and regulations in trade and industry and capital and foreign exchange markets, the lowering of taxes and tariffs, and the creation of a conducive climate for private investment, both domestic and foreign, helped to set India on the road for sustained growth.

India remained relatively immune to turmoils in international capital markets such as Mexico (1994) and Asia (1997) and could tide over economic sanctions imposed after its underground nuclear tests (1998), the adverse impact of high oil prices (1999-2000) and pressures of global competition, all showing up the resilience of the economy. At the same time, India had shored up external reserves with NRI bond floatations and investment inflows. As long as the global links have not grown appreciably and the economy is well managed, it is unlikely to come under the contagious effects of financial turmoils in other parts of the world. But any prolonged volatility in foreign exchange markets in ma-

for industrial countries could begin to exert more pressures on the exchange rate of the rupee and also affect the trade turnover.

A virtual stagnation in the rates of domestic savings and capital formation in the latter half (1996-2000) has not disrupted GDP growth achieved with improved productivity. But for the medium-term, both the present level of capital formation and the availability of infrastructure are clearly inadequate to move the economy on to a higher growth path of 7 to 8 per cent which is considered essential to garner resources for the State to increase public investments in economic and social overheads. The inescapable requirements of higher growth in resource mobilisation and strategies needed to fulfill the long-held basic social objectives are being spelt out by the Planning Commission in its Approach on the Tenth Five Year Plan (2002-07) document.

Recent Economic Performance (1997-98 to 2000-01)

The Indian economy certainly enhanced its performance in the 1990s with GDP growth average at 6.4 per cent as against the 5.5 per cent in the eighties. Growth in agriculture has been lower on average through the decade at 1.5 per cent while industry was also on a lower trajectory after 1995-96. Fiscal and other policies designed to stimulate industrial activity did not bring about the expected revival, especially in the manufacturing sub-sector, which has the predominant weightage (80 per cent) in the industrial production index. Against industry's 5.6 per cent, the services sector recorded average growth at 8.2 per cent, thus making up for shortfalls in the primary and secondary sectors and contributing to the resilience of the economy in years of agricultural setbacks and industrial slowdown.

In the changing sectoral composition of GDP, the Services sector has assumed a key role and its expansion influences production, employment and exports. Even if a good part of the growth in services sector is traceable to community, social and personal services, which include public administration and defence, where incomes have risen on account of factors like revision of pay scales and other emoluments, its contribution to the GDP growth of 6.4 per cent in 1999-2000 was estimated to be about 70 per cent.

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The surge in the Services sector will continue and holds promise of sustaining overall economic growth at 7 to 8 per cent in the years to come. In most developed nations, the Services sector has the leading role and in USA, it accounts for 70-80 per cent of GNP. This sector also lends itself for widening of the tax base for Government to mobilise additional resources in its quest for fiscal stability and consolidation.

The last four years (1997-2001) have seen not only characteristic ups and downs in agriculture, partly resulting from uneven spread of the monsoon, but also a distinct slowdown in industry. The average growth in agriculture is reduced to 1.5 per cent (against the target of 3.5 to 4 per cent).

Lack of buoyancy in rural and urban demand, excessive capacity creation of earlier years, poor investment climate, higher lending rates of banks and financial institutions and infrastructural bottlenecks have led to the industrial downturn in the latter half of the 1990s. The 2001-02 "growth-friendly" budget, with a host of concessions and incentives for the corporate sector, and cuts in interest rate was framed against this dismal background. Industry during 2000-01 ended with one of the lowest growth rates at 5 per cent after a temporary revival in the previous year. Industry must speed up its restructuring to face global competition with the lowering of tariff and non-tariff barriers by India. There has been no revival in investment in capital goods, which also face competition from imports. Some segments of manufacture have been going through the process of focusing on their core competence in the globalised business environment. This has also led to mergers and acquisitions and downsizing in the private corporate sector.

In the Ninth Plan Period (1997-2002), the economy's growth rate fell short of the revised 6.5 per cent. After a drop to five per cent in 1997-98, growth rates of 6.6 per cent, 6.4 per cent and 6 per cent (estimated) have been recorded in the three following years ending March 2001. In the terminal year of the plan (2001-02), the revenue receipts budgeted for are based on 6.5 per cent growth, though the prospects at the end of the first quarter (April-June 2001) did not seem bright. The Reserve Bank estimates GDP growth, in 2001-02 to be 6 to 6.5 per cent.

While the forecast of a normal monsoon in 2001, for the fourteenth year in succession may produce a bumper harvest, there are doubts whether a strong and sustained industrial recovery would be set in motion during 2001-02. For, the budget did not give any significant thrust for public investment, the key to industrial revival in general. Continued lack of or slow progress in reforms in key sectors of infrastructure, especially power and transport, was also a negative factor. Basic goods industries were languishing while demand for machinery and equipment had not picked up till the first quarter (April-June).

In 2001-02, the economy will have to cope with not only the high oil prices but also a global downturn, which will affect trade and financial flows. Growth projections for the world economy have been scaled down for 2001 in the wake of the slowdown in US economy, the locomotive for global output and trade. Net external capital flows for developing countries in 2001 were also likely to decline though the volume of foreign direct investment (FDI) flows to developing countries might not be affected. But bulk of FDI flows go to a few select countries in Asia and Latin America where multinational companies have already a strong presence. China, by the size of its market and the opening up of its coastal areas with special economic zones, has been the largest recipient of FDI of the order of 40-45 billion dollars a year for several years now. India currently receives only two to three billion dollars against a desired target of 10 billion dollars, in spite of policy liberalisation to allow FDI in all but a couple of strategic sectors with higher participation levels ranging from 26 to 100 per cent.

India's growth record and economic stability have given it a new stature in global capital markets but international financial institutions like IMF and the World Bank maintain that India could do much better if it controlled its public sector deficit (Centre and the States) which is 10 to 11 per cent of GDP. Such deficits are unsustainable as these keep borrowings at over 100,000 crores a year. Interest payments budgeted for in 2001-02 at Rs. 112,300 crores are disturbingly close to the projected fiscal deficit i.e. borrowing and other liabilities totalling Rs 116,314 crores during the year. Of this, 67 per cent will go to finance



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consumption expenditure (revenue deficit). The interest payments account for 48 per cent of revenue receipts and nearly 33 per cent of total Government expenditure during 2001-02.

Many States are in fiscal stress in spite of larger devolution of Central resources to them and are unable to finance development without undertaking drastic reforms such as subsidy reduction, levy of user charges, downsizing administration for cuts in government expenditure and broadening the base of taxation to cover new areas including services. States' deficits had deteriorated from 2.5 per cent of GDP in 1995-96 to 4.9 per cent by 1999-2000. Several States, particularly in the Hindi-speaking belt, lag far behind the national average in economic and social indicators. Inter-state disparities in life expectancy, infant mortality, literacy, rate of population growth, sex ratio, per capita incomes and infrastructure pose major hurdles in achieving balanced development of the country.

Economic Trends and Concerns

Foodgrain production which rose to a record 208 million tonnes in 1999-2000 declined to 196 million tonnes in 2000-01 mainly due to drought conditions in several parts of the country. This reduction does not affect the plentiful supply position in the country. Indeed one of the major problems before Government is to bring down the unprecedented level of procured foodgrain stocks at over 50 million tonnes in June 2001. Unless radical changes are brought out in procurement pricing, buffer stocking and public distribution system, the food economy will go out of gear. Government's food subsidy bill has been growing sizeably because of excessive procurement and low offtake in PDS. Farmers are also hit by fall in grain prices and depend on Government to relieve them of stocks.

Continuing industrial slowdown is another problem before the Government. Tax and interest rate cuts in the new fiscal year had not had the desired effect in the early months of the fiscal year. An assumption is that a good monsoon will revive rural demand for goods later in the year.

With the removal of all quantitative restrictions on imports with effect from April 1, 2001, both farmers and manufactures have apprehensions of cheaper imports threaten-

ing their existence. While import tariffs for agricultural commodities have been raised to protect Indian farmers, the major issue is how to safeguard the country's interests in the W.T.O negotiations on Agriculture.

The annual rate of inflation which was 6 per cent in 1998-99 declined to 3.3 per cent in 1999-2000 but rose to 4.4 per cent in 2000-01. The spurt was caused by the revision of petroleum prices in March 2000. In 2001-02, rate of inflation was an uptrend, close to six per cent, by June 2001. A five to six per cent rate of inflation is relatively higher for global comparison but manageable in the Indian economy without any adverse consequences.

Issues and Priorities

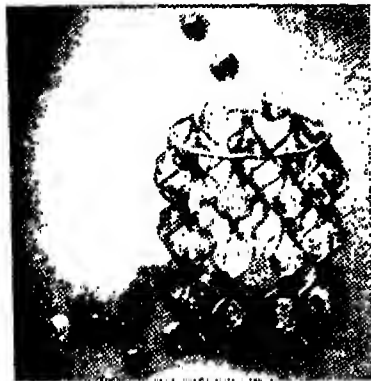
The persistence of high fiscal deficits both at the State and Central levels have led to high debt service and Government's ability to undertake public investment is in question. Borrowings due to high fiscal deficit have kept real interest rates high, deterring private investment in the economy. A credible programme for fiscal improvement in the medium term is called for. Centre's fiscal deficit was contained at 5.2 per cent of GDP and the Budget for 2000-01 has fixed a 4.7 per cent target. Unless all revenue assumptions including disinvestment receipts of Rs 12,000 crore materialise, it will be difficult to adhere to the target.

In States, fiscal deterioration has deprived development of resources as planned and many State Governments have been diverting plan funds for payment of salaries to the employees. Centre-state fiscal relations have to be re-worked through the National Development Council with political commitment to put the fiscal house in order.

Fiscal reforms proposed include subsidy reductions, levy of user charges for public services (power, water, transport) wherever they are below economic cost, and broadening the tax base to raise the Tax-GDP ratio from 14 to 17 per cent in the next five years.

Agriculture

Agriculture is the most crucial sector of the economy, for it provides food security, generates employment, helps to alleviate poverty, and contributes significantly to the country's exports. The role of agriculture has



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me even more important in the context of current global negotiations on bringing the sector into the multilateral trading system, which will open up tremendous opportunities for exports and imports at competitive prices for food surplus and deficit countries.

Agriculture in India was almost entirely dependent on monsoon at the time of Independence (1947) but over the decades, remarkable strides have been made in the creation of irrigation facilities, both major and minor, in the construction of large dams and canals and adoption of improved methods of cultivation using chemical fertilisers and high-yielding seed varieties.

From 50 million tonnes in 1950, foodgrain production (rice, wheat, coarse grains and pulses) had risen to 208 million tonnes in 1999-2000, the highest on record. Such increases have come mainly through higher yields per hectare especially since 1970s, as the gross area under cultivation has reached its limits. In fact, some decline in the area under foodgrains has taken place and has become a matter of concern. Agricultural output is subject to fluctuations from year to year due to inadequate rainfall or drought conditions in parts of the country. Thus, the foodgrain production declined to an estimated 198 million tonnes in 2000-01, against a target of 212 million tonnes, because of adverse weather conditions.

By the beginning of 1980s, India had become nearly self-sufficient in foodgrains and large-scale imports had been done away with except for limited quantities in years of severe drought as a safeguard against build-up of price pressures and for maintaining an adequate level of buffer stocks for the public distribution system. The final estimate of foodgrain production in 1999-2000 given by the Ministry of Agriculture is as follows: Rice 99.48 million tonnes; wheat 75.57 million tonnes; coarse cereals 30.47 million tonnes and pulses 13.36 million tonnes. Output of commercial crops like cotton, oilseeds, sugarcane, fruits and vegetables and live stock products and fisheries have also recorded significant increases over the decades. India is one of the major producers of coffee and tea.

Coffee is cultivated in about 3.4 lakh hectares mainly spread over three southern states, Karnataka, Kerala and Tamil Nadu. Of an es-

timated coffee production of 2.92 lakh tonnes in 1999-2000, India exported 1.6 lakh tonnes earning foreign exchange of 315 million dollars. India is the largest producer and consumer of tea, and accounts for 29 per cent of world production. Production in 1999 was 806 million kgs, of which 190 million kgs. was exported. The Commodity Boards for the plantation crops are being reorganised to focus on gaining higher productivity and competitiveness.

India is also the largest producer of coconut, holds leading position in cashewnut and grows a variety of spices like pepper, ginger, cardamom, turmeric etc. India has great potential in exports of products of horticulture, being the second largest producer of vegetables and having a share of 10 per cent in world fruit crops.

Agriculture provides employment to 65 per cent of the work force. Despite a declining share in GDP, from 52 per cent in the 1950s to 26 per cent at present, agriculture is the single largest contributor to GDP. The average annual rate of growth in agriculture has fallen below the 4 to 4.5 per cent target set in five-year plans except in years of bumper harvests. In the 1990s, growth in agriculture recorded an average 3.3 per cent.

With a galloping population now at over one billion, India needs to produce more food. The present growth just barely keeps pace with population growth rate of 1.93 per cent. Strong industrial growth depends on agriculture, which provides raw materials as well as generates demand for consumer goods.

Notwithstanding self-sufficiency, food and nutrition security is not assured for all. Often, food does not reach where it is most needed, highlighting failures in the supply chain. Production of coarse cereals, which the poor consume more, has stagnated at about 30 million tonnes while output of pulses has fluctuated in the 11-14 million tonnes range from the 1960s. India will need to produce about 300 million tonnes of foodgrains by the end of the first decade of the 21st century to keep pace with the ever-increasing population.

India exports agricultural products, to the tune of 15 to 20 per cent of total exports. There is vast scope for increasing its share in global agriculture trade once the WTO negotiations lead to an agreed framework of rules and dis-



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become even more important in the context of current global negotiations on bringing the farm sector into the multilateral trading system, which will open up tremendous opportunities for exports and imports at competitive prices for food surplus and deficit countries.

Agriculture in India was almost entirely dependent on monsoon at the time of Independence (1947) but over the decades, remarkable strides have been made in the creation of irrigation facilities, both major and minor, with the construction of large dams and canals and adoption of improved methods of cultivation using chemical fertilisers and high-yielding seed varieties.

From 50 million tonnes in 1950, foodgrain production (rice, wheat, coarse grains and pulses) had risen to 208 million tonnes in 1999-2000, the highest on record. Such increases have come mainly through higher yields per hectare especially since 1970s, as the gross area under cultivation has reached its limits. In fact, some decline in the area under foodgrains has taken place and has become a matter of concern. Agricultural output is subject to fluctuations from year to year due to inadequate rainfall or drought conditions in parts of the country. Thus, the foodgrain production declined to an estimated 198 million tonnes in 2000-01, against a target of 212 million tonnes, because of adverse weather conditions.

By the beginning of 1980s, India had become nearly self-sufficient in foodgrains and large-scale imports had been done away with except for limited quantities in years of severe drought as a safeguard against build-up of price pressures and for maintaining an adequate level of buffer stocks for the public distribution system. The final estimate of foodgrain production in 1999-2000 given by the Ministry of Agriculture is as follows: Rice 89.48 million tonnes; wheat 75.57 million tonnes; coarse cereals 30.47 million tonnes and pulses 13.36 million tonnes. Output of commercial crops like cotton, oilseeds, sugarcane, fruits and vegetables and live stock products and fisheries have also recorded significant increases over the decades. India is one of the major producers of coffee and tea.

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timated coffee production of 2.92 lakh tonnes in 1999-2000, India exported 1.6 lakh tonnes earning foreign exchange of 315 million dollars. India is the largest producer and consumer of tea, and accounts for 29 per cent of world production. Production in 1999 was 86 million kgs, of which 190 million kgs. were exported. The Commodity Boards for plantation crops are being reorganised to focus on gaining higher productivity and competitiveness.

India is also the largest producer of coconut; holds leading position in cashewnut and grows a variety of spices like pepper, ginger, cardamom, turmeric etc. India has great potential in exports of products of horticulture, being the second largest producer of vegetables and having a share of 10 per cent in world fruit crops.

Agriculture provides employment to 65 per cent of the work force. Despite a declining share in GDP, from 52 per cent in the 1950s to 26 per cent at present, agriculture is the single largest contributor to GDP. The average annual rate of growth in agriculture has fallen below the 4 to 4.5 per cent target set in five-year plans except in years of bumper harvests. In the 1990s, growth in agriculture recorded an average 3.3 per cent.

With a galloping population now at over one billion, India needs to produce more food. The present growth just barely keeps pace with population growth rate of 1.93 per cent. Strong industrial growth depends on agriculture, which provides raw materials as well as generates demand for consumer goods.

Notwithstanding self-sufficiency, food and nutrition security is not assured for all. Often, food does not reach where it is most needed, highlighting failures in the supply chain. Production of coarse cereals, which the poor consume more, has stagnated at about 30 million tonnes while output of pulses has fluctuated in the 11-14 million tonnes range from the 1960s. India will need to produce about 300 million tonnes of foodgrains by the end of the first decade of the 21st century to keep pace with the ever-increasing population.

India exports agricultural products, to the tune of 15 to 20 per cent of total exports. There is vast scope for increasing its share in global agricultural trade once the WTO negotiations lead to an agreed framework of rules and di-



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become even more important in the context of current global negotiations on bringing the farm sector into the multilateral trading system, which will open up tremendous opportunities for exports and imports at competitive prices for food surplus and deficit countries.

Agriculture in India was almost entirely dependent on monsoon at the time of Independence (1947) but over the decades, remarkable strides have been made in the creation of irrigation facilities, both major and minor, with the construction of large dams and canals and adoption of improved methods of cultivation using chemical fertilisers and high-yielding seed varieties.

From 50 million tonnes in 1950, foodgrain production (rice, wheat, coarse grains and pulses) had risen to 208 million tonnes in 1999-2000, the highest on record. Such increases have come mainly through higher yields per hectare especially since 1970s, as the gross area under cultivation has reached its limits. In fact, some decline in the area under foodgrains has taken place and has become a matter of concern. Agricultural output is subject to fluctuations from year to year due to inadequate rainfall or drought conditions in parts of the country. Thus, the foodgrain production declined to an estimated 198 million tonnes in 2000-01, against a target of 212 million tonnes, because of adverse weather conditions.

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capities. India can export not only foodgrains but also a variety of agri-products. Development of food processing industry will greatly facilitate exports of value added products. In 1999-2000, India's exports and imports of agricultural products (including cereals) totalled 1.26 and 4.22 million dollars respectively.

Decline in Capital Formation

After the euphoria of the Green Revolution of the sixties died down, agriculture turned out to be a neglected sector. Public investment in agriculture has been declining for long staying funds for creating new capital assets in irrigation, power and rural infrastructure.

The share of public sector investment in agriculture came down from 35 per cent in 1960-61 to 23 per cent in 1998-99 while the share of private investment went up from 66 per cent to 76.4 per cent in this period.

The decline in capital formation in agriculture has affected employment in a sector, which offers the maximum scope for new entrants to the labour force in the rural areas.

So far, the strategy in agriculture has relied on subsidies (food and fertilisers) and increases in minimum support prices for every crop season. This policy no doubt helped to achieve higher levels of output of fibres and oil seeds but it has also created serious imbalances in the food economy as well as for agricultural development in general.

The heavy subsidies by the Centre and the States have cut into essential investments in agriculture besides causing inefficient use of water and power for which even the cost is not recovered. It is possible to lower the level of subsidies gradually and provide the farmers with cheaper credit and marketing and storage facilities. India needs to give greater attention to both soil and water conservation. Already in Northern India, there is a shrinking of ground water levels. Development of watershed on slopes and hilly terrain has to be accelerated in rain-fed areas.

Secondly, restrictions on movement of agricultural commodities both within and across States have aborted gains for farmers from free movement and lower prices for consumers. Removal of constraints in agriculture as far as will facilitate greater flow of private investment in rural infrastructure including storage capacity.

Reforms in the agriculture sector to reinforce its strength in the Indian economy and equip

it to seize opportunities in the global market have become urgent, especially in the context of the phasing out of quantitative restrictions on imports by India. Import tariffs on a whole range of commodities—foodgrains, fruits, spices and edible oils—have been fixed at enhanced levels to give protection to domestic farmers but they are still below the bindings which India has made with WTO.

While wheat and rice can be freely imported with removal of quantitative restrictions on imports under the WTO regime, domestic producers have been given a measure of protection by imposition of customs duty on cereals and edible oils at rates which would make imports costlier.

National Agriculture Policy

India's agrarian economy is a mammoth enterprise with over 200 million farmers and farm workers who constitute the backbone for national progress. Given the untapped potential for growth through more efficient use of available land and water resources, technology absorption and creation of infrastructure (irrigation, roads and power), a National Agriculture Policy has been framed by the Government of India. It aims at a growth rate of over four per cent per annum, which would be well-spread across regions; it seeks to maximise benefits from export of agricultural products. The policy will promote "sustainable agriculture" through economically viable use of natural resources—land and water and genetic endowment—with concern for the environment. The incentive regime for agriculture would be such that it encourages capital formation and improves the terms of trade with manufacturing sectors. A favourable price and trade regime for farmers, bridging of the gap between irrigation potential created and utilised, development of marketing infrastructure and storage facilities, and private sector participation through contract farming to facilitate technology transfer and capital inflows for diversification of agriculture are other features of the policy.

Immediate Concerns

Paradoxically, two years of an upswing in agriculture (1999-2000) have resulted in sharp falls in prices and distress to farmers in most parts of the country. At the same time, an unprecedented pile-up of procured foodgrains

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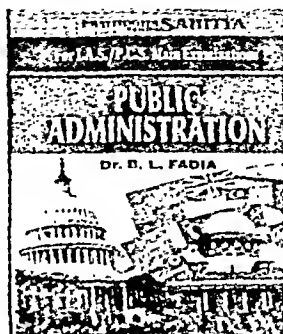
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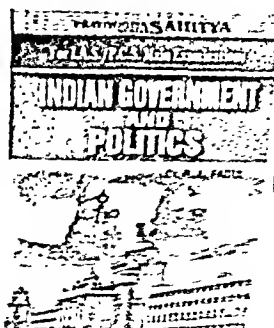
ADMINISTRATIVE THEORY

Dr. B. L. FADIA

INDIAN GOVERNMENT AND POLITICS

Dr. B.L. Fadia Fifth Edn. 2002 Price Rs. 350/- pp. 978

The book critically examines the dynamics of federalism and centre-state relations. The topics on the President, Prime Minister, Governor, Judicial Review, Judicial Activism, Minority Politics in India, Electoral Reforms, Crime and Politics, The 13th Lok Sabha Elections and emerging political trends are discussed with relevant cases.



held by state agencies totalling over 50 million tonnes has added to the burdens on the Budget. Misery in the rural sector has been dramatised in farmers' suicides in different parts of the country. While the well-to-do farmers would have benefited from the hikes in support prices, small and marginal farmers, faced with difficulties in the matter of credit and obtaining the right type of inputs, have been in trouble. Their woes were heightened by fears about unrestricted flow of cheaper primary products from developed nations, which subsidise their farmers in the form of income support and export assistance. Government had increased the MSP (Minimum Support Prices) in 2000-01 with Rs 580 per quintal for wheat and Rs 540 for paddy and had procured even larger quantities of rice and wheat in the two years than in the past by spending Rs 30,000 crores.

Given the low offtake in the public distribution system, accumulation of food stocks is resulting in a larger burden of food subsidy. The low offtake in PDS arises from the fact that market prices are lower and supplies are plentiful. Government has also not been able to utilise any large volume of surplus stocks in food-for-work programmes in drought areas. In this unenviable situation, the Central Government had proposed decentralisation of food procurement and public distribution but States, by and large, are unwilling to undertake this responsibility and would like the present arrangement to continue. In view of this resistance and the apprehensions voiced over the implications of the WTO agreement on agriculture, a Committee of Chief Ministers and experts has been set up to examine all the issues relating to food policy as well as the WTO agreement on agriculture.

Agricultural prospects in 2001-01 appeared bright as the South-West Monsoon advanced, as forecast, at the beginning of June. For the thirteenth year in succession, a normal monsoon has been forecast by the Indian Meteorological Department.

Industrial Scene

Trends (1996-2001)

Industry has been on a slowdown since 1996-97 with a partial pick-up in growth in 1999-2000 to 6.7 per cent, and ended 2000-01 at a lower five per cent. The persistence of

slow growth, akin to recessionary conditions, has been attributed to various factors, chiefly, lack of demand in the economy and decline in investments, especially public investment in key sectors of infrastructure, which can be a catalyst for private corporate investments in new ventures, expansion and modernisation. This is reflected in the poor performance of capital goods and intermediate goods sub-sectors. The sharp rise in international oil prices since 1999 and competition from imports in certain products, the bottlenecks in existing infrastructure, and the cost of credit have been other constraining factors.

The growth average of industry in the first four years of the Ninth Plan (1997-2001) has been 5.6 per cent against the plan target of 8.2 per cent per annum. In 1980s, India's industrial growth was buoyant at 7 to 8 per cent, and after the crisis of early 1990s, manufacturing hit a record 14 per cent in 1995-96. The first four years of the Ninth Plan have been a period of a virtual slump in industry. This has been carried into the first month (April) of 2001-02 when manufacturing recorded a mere 2.7 per cent growth (7.1 per cent in April 2000).

The following Table brings out the extent of slowdown since 1995-96:

Year	(per cent)			
	Overall Industrial growth	Mining	Manufacturing	Electricity
1995-96	13.0	9.6	14.1	8.1
1996-97	6.1	-2.0	7.3	4.0
1997-98	6.7	5.9	6.7	6.6
1998-99	4.1	-1.7	4.1	6.5
1999-2000	6.7	1.0	7.1	7.3
2000-01	5.0	3.6	5.3	4.0

Basic, Intermediate and Consumer goods (other than Consumer durables) which were in double-digit growth in 1995-96 recorded lower levels of performance in subsequent years.

Domestic production of capital goods has been exposed to competition and also held down by excessive capacity creation in the first half of 1990s.

Industry in India has been undergoing restructuring, along with mergers and acquisitions in order to equip itself to face external competition. Progress toward a competitive industrial structure has however been somewhat slow.

Stimulus to Industry

The Finance Minister Mr Yashwant Sinha had effected rationalisation of direct taxes in three budgets (1998-2001) with selective reductions in rates and considerable simplification of procedures, mainly to stimulate industrial recovery and higher output. The 2001-02 Budget was even more growth-friendly with incentives and direct tax reliefs, such as abolition of surcharge and lowering of dividend distribution tax. The focus was also on bringing down the cost of credit by lowering the interest rates over a wide spectrum. The Reserve Bank reduced the bank rate in March to seven per cent, effected cut in Cash Reserve Ratio (CRR) and took other measures to augment liquidity. Banks were asked to lower the prime lending rates for exporters and "credit-worthy" borrowers.

The overall investment climate in the country has been affected not only by the sluggishness of aggregate demand and the excess capacity created in earlier years but also by the lack of vibrancy in the Stock Market. The capital market conditions in recent years have not been favourable for raising funds through public issues. The primary market has witnessed distinctly depressed conditions since 1995-96. Resource mobilisation by non-Government public limited companies declined consecutively from 1996-97. The secondary markets had also gone through a prolonged phase of subdued activity affecting adversely the primary market for new issues. With some improvement, aggregate resource mobilisation through prospectus and rights issues in 1999-2000 was Rs 7704 crore (inclusive of primary issues by public sector banks).

Infrastructure

After a decade of opening up of power generation for private sector and laying down of detailed policy framework including counter-guarantees, initially for eight projects, India has not made significant advance in new capacity creation by the private sector. The Dabhol power project of M/s Enron in Maharashtra is the only major plant to be commissioned in the Ninth Plan (1997-2002) but even this has been caught up in disputes over tariffs and dues from power purchaser, the Maharashtra Electricity Board. Against the plan target of 40,245 MW as capacity addition

by the Centre, States and private parties, only 50 per cent of the target may be achieved by March 2002. In the Eighth Plan (1992-97), there was a similar big deficit over the target.

Coal output target has been scaled down from 412 million tonnes to 328 million tonnes in 2001-02. Coal production was 299 million tonnes in 1999-2000 and was higher at 309 million tonnes in 2000-01. Seventy per cent of coal consumption is for power generation. The six infrastructure industries (crude petroleum, petroleum products, coal, electricity, cement and steel) had a slower growth at 5.3 per cent in 2000-01 as against 9.1 per cent in the previous year. With indigenous crude production stagnating at 31-32 million tonnes India depends heavily on imports, for nearly 70 per cent of requirements. Cement output at 99.9 million tonnes in 2000-01 was lower than the 100.4 million tonnes in the previous year. India produced 30.2 million tonnes of finished steel (28.5 million tonnes previous year) in both the integrated plants (SAIL and TISCO) and in the private sector steel units.

Public Sector

The role of public sector, which occupied the commanding heights of the economy for decades, has been shrinking in 1990s. Several major industries exclusively reserved for public sector have been taken off the list including Defence equipment, which has been thrown open in May 2001 for private participation. The only items reserved for the public sector now are Atomic Energy and Railway Transport. The public undertakings constitute a vital segment of the economy and has been the sole producer in areas like hydrocarbons, coal, lead and zinc and strategic minerals. It has a predominant share in output of power generation and other heavy equipment as well as financial services like banking.

Public sector growth since 1951 can be seen in the number of enterprises rising from five in 1951 to 240 at the end of March 2000. Total investment in these enterprises stood at Rs 252,554 crores. Their turnover in 1999-2000 was Rs 389,310 crores, recording growth of 14 per cent over the previous year. However, these enterprises with a mixed performance have been giving an insignificant return on capital employed. Over 100 enterprises are loss making for several years. No

profit, after taxes and depreciation, was 3.74 per cent in 1999-2000.

Reform of the public sector to make it more efficient, autonomous, and accountable has been on the Government's economic agenda for a decade. Unlike many countries, India has not so far opted for outright privatisation of public sector units, though recently the concept of "strategic sale" of public enterprises to private firms with majority participation is being adopted. Disinvestment of a percentage of shares owned by the Government in public undertakings emerged as a policy option in the wake of economic liberalisation and structural reforms launched in 1991. The object was to raise some resources to reduce budgetary gaps and provide market discipline to the performance of public enterprises in general.

In a policy statement on public sector while presenting the Union Budget in February 2000, the Finance Minister, Mr Yashwant Sinha, had said the main elements were restructuring and reviving potentially viable PSUs; closing down PSUs which cannot be revived; bringing down Government equity in all non-strategic

PSUs to 26 per cent or lower, if necessary and fully protecting the interests of workers.

Government had divested a part of its equity from about two per cent to 49 per cent in 40 undertakings till March 1999. The largest chunk of over 40 per cent of government equity had been disinvested in Hindustan Petroleum Corporation, Videsh Sanchar Nigam Mahanagar telephone Nigam, Indian Petrochemicals Corporation and Hindustan Organic Chemicals. Between 1991-92 and 1999-2000, the total realisation through dis-investment was Rs 18,368 crore against the targeted Rs 44,300 crore.

Employment in public enterprises has also come down from 2.18 million in 1991-92 to 1.85 million in 1999-2000. Around 2.7 lakh employees opted for the Voluntary Retirement Scheme (VRS) upto March 2000.

The public sector has played a pioneering role toward a self-reliant growth of the economy so far. But their operations have revealed several weaknesses which have to be overcome. The enterprises must have greater commercial orientation, earning profits to



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grow and fulfilling their objectives. The Government has to extend maximum autonomy to the enterprises and become a facilitator instead of treating them as extended arm of the Government. A right balance between autonomy and accountability of the enterprises needs to be struck without further delay.

Overall, the public undertakings of the Central Government will continue to make a major contribution to output in future and substantially to Gross Fixed Capital Formation (GFCF). Public sector (Government and public enterprises) at present has a share of 25 per cent in gross domestic product (GDP).

Foreign Trade

From April 1, 2001, India freed all its imports from quantitative restrictions (QRs) by completing the process of phased lifting of QRs over a five-year period, which covered 4,000 items of consumer interest. Adequate defences have, however, been built into the Export-Import policy framework to ensure that it is not a case of opening the "flood-gates" for imports and that such imports entering even at higher tariff levels do not cause serious injury to domestic manufacturers or farmers or the small-scale sector, which is more vulnerable to inflow of cheaper alternatives. There are safeguards for protection of domestic industry and agriculture through mechanisms, which are consistent with India's commitments to the World Trade Organisation. These can take the form of "safeguard duties" and "anti-dumping duties".

India's trade liberalisation began in 1991, as part of the fiscal adjustment-cum-structural reforms launched with IMF assistance to tide over the immediate balance of payment crisis. Till then, import licensing and controls with banned, restrictive and open lists had been the dominant features of the Indian economy coupled with export pessimism.

Trade policy reform was aimed at bringing down the extremely high tariffs on imports and easing restrictions on both imports and exports. The peak level of customs duty has been gradually brought down from 150 to 35 per cent and the Finance Minister Mr Yashwant Sinha has announced in his budget speech (March 2001) that it would be further reduced to 20 per cent within three years to become comparable to East Asian levels. In-

dia is still regarded as an overly protected economy.

In theory, India is one of the largest markets for imported goods, and though from April 1, 2001, all QRs stand removed, relatively high import duties and the limited absorptive capacity of consumers in general should not cause any big surge in imports of consumer goods. From combs and pens to a high range of electronic goods and automobiles, imports will be permitted but at a price which only the affluent sections could have access to.

The final list of 715 items freed from QRs include agricultural (wheat, rice and coarse grains) and dairy (milk, cream and cheese) products, coffee, tea, copra, coconut oil, fruits and vegetables, meat varieties, some 300 textile items including woven fabrics and carpets, alcoholic drinks, petroleum products, industrial diamonds, audio equipment, colour television sets, new and second-hand automobiles and motor cycles.

Customs duty on a number of agricultural and other products has already been increased in the Union Budget for 2001-02. The tariff "bindings" (ceilings) India has made with WTO give substantial leverage for protection of farmers. Now that the second hand car can also be imported, customs and other duties applicable to them would be more than 180 per cent.

Experience so far has been that the removal of QRs in the last few years has not led to any flooding of imports. There are 330 sensitive items of import, which would be monitored. The dismantling of QRs may begin to impact when economic activity gathers momentum in the coming years.

India by now would have emerged as a leading trading nation if pessimism had given way to export dynamism in the earlier decades. Despite the spread of export consciousness in more recent decades and policy and procedural liberalisations, India's share stuck at meagre 0.8 per cent is far lower than that of even some of the smaller South East Asian countries like Malaysia. China rapidly built up its exports to claim a three per cent share in world trade. India hopes to gain a share of at least one per cent by 2004-05.

The Exim Policy for 2001-02 seeks to give an impetus to agricultural exports in the context of the current WTO negotiations on integrating agriculture into the multilateral

trading system. Export restrictions on foodgrains, and a few other agriculture products have not been fully lifted till June 2001. From time to time, Government authorises limited quantities for export. India has tremendous potential for exports not only of foodgrains but also of fruits and vegetables and other processed foods. At present, agricultural products make up 18 to 20 per cent of total exports.

To offset any adverse impact of the elimination of the quota restrictions on the economy, canalisation of certain essential imports is being resorted to through the existing state trading enterprises. The items are wheat, rice, maize, petrol, diesel, aviation turbine fuel and urea. Secondly, imports of products of plant and animal origin would be subject to permits from the Ministry of Agriculture after an analysis based on sanitary and phyto-sanitary measures. Both these measures are permissible under WTO rules and disciplines.

Exim Policy 2001-New Features

a) Agricultural Export Zones: With a view to providing remunerative returns to the farming community in a sustained manner, efforts will be made to secure improved access for agricultural products in the international market. State governments can identify product-specific Agri-export zones where services to the farmers would be provided. These will include post-harvest treatment, plant protection, processing, packaging and storage. Agri exporters will be entitled for recognition as Export House/Trading House/Star Trading House/Super Star Trading House on achieving one-third of the threshold limit prescribed for exporters of goods.

(b) Special Economic Zones (SEZ): Taking the cue from China's success in export thrusts from its coastal areas, Special Economic Zones are being set up in select States. In these zones, manufacturing units are allowed duty free import/procurement from the rest of the country for development. Foreign direct investment is permitted for all manufacturing sectors except for a small negative list. No licence is required for setting up units for items reserved for small-scale industry (SSI). Units in SEZ are permitted to sell goods in the rest of the country subject to import tariff.

Exports and Imports

India's exports in 2000-2001 (April-March) registered a growth of about 20 per cent in dollar terms, and were valued at 44.1 billion dollars as against 36.8 billion dollars in 1999-2000. In rupee terms, the exports were Rs 201674.10 crore (+26%). Imports totalled 49.8 billion dollars in 2000-01, mainly due to higher priced oil imports (15.6 billion dollars). Non-oil imports recorded a much lower growth. The trade deficit declined to 5.8 billion from the 12.9 billion dollars of the previous year (1999-2000).

Prospects In 2001-02

Having achieved a growth rate close to 20 per cent in 2000-01, the Commerce Ministry has set an export growth of 18 per cent for 2001-02. There are uncertainties for the world economy in the wake of the slowdown in USA, the principal market for developing countries including India. (Indo-US trade turnover exceeds 12 billion dollars with a balance of around five billion dollars in India's favour.) The World Trade Organisation (WTO) has forecast a growth slowdown to seven per cent in global exports as against 12.5 per cent in 2000, one of the best in the last five decades. India's impressive exports in 2000-01 must be viewed in the context of this trade boom. For the current year, the depressed global growth prospects may make it difficult for India to achieve an 18 per cent growth.

Since India's non-oil imports are not growing as in the past, because of industrial stagnation and lack of investments, India will be able to manage with sustainable trade deficits over the next couple of years. The surge in oil prices since the latter half of 1999 pushed up the oil import bill to 15.6 billion dollars in 2000-01 as against 9.6 billion dollars in the previous year. This may further increase to 18-19 billion dollars in 2001-02 because of growing demand for petroleum products and rising level of dependence on crude imports to the extent of over 70 per cent of the country's requirements.

External Sector

A country's balance of payments has two parts: (i) a current account, comprising (i) outcome of exports and imports, and (ii) earnings and payments under 'invisibles'

(covering travel, transportation, insurance, private transfers, and miscellaneous services in which software export earnings are currently included); (2) a capital account giving the capital inflows and payments.

Since the balance of payments crisis in 1991, India embarked on a series of measures to liberalise trade regime, give greater thrust to exports, attract foreign investments and ensure exchange rate stability. Fiscal adjustment and structural reforms coupled with the lowering of tariffs and unification of exchange rate and convertibility of the rupee for current account transactions were all designed to strengthen the economic fundamentals and secure India's external viability.

The international community including NRIs responded positively as the country recorded higher growth rates and managed to contain the current account deficit within two per cent of GDP. Liberalisation of policies and procedures and structural reforms impressed investors and creditors, and influenced foreign exchange flows.

Since 1996-97, the balance of payments position has remained comfortable with increases in foreign exchange reserves after balancing the current account deficit with capital inflows. Between 1993-94 and 1995-96, exports grew by 18 to 20 per cent in dollar terms while there was slowdown in the latter half till 1999-2000 when there was a turnaround and export growth was 11.6 per cent.

A stronger revival followed in 2000-01 when exports touched 44 billion dollars registering a 20 per cent increase, but there were bigger trade deficits because of the steep rise in international oil prices. The oil import bill rose by 64 per cent to 10.5 billion dollars. Non-oil imports being at low level, the trade balance was manageable through the decade.

A strong surge in invisible receipts, the major elements of which are the remittances from Indians abroad of 10 to 12 billion dollars a year (private transfers) and software export earnings, helped to contain the current account deficit within 1 to 1.5 per cent of GDP in the latter half of the decade.

The surplus in capital account helped to raise the level of foreign exchange reserves every year by 4 to 5 billion dollars on average. By June 2001, the foreign exchange reserves (other than gold and SDR) totalled 40 billion dollars, equivalent to 8 to 9 months of imports.

At 95-98 billion dollars, India's external debt does not give cause for concern because nearly 40 per cent of it is concessional and the ratio of short-term borrowings is relatively small. India's external debt as a ratio of GDP is low at 22 per cent and the ratio of debt servicing to current account earnings (exports and invisibles) has also lowered to 16 per cent from 30 per cent in 1991-92.

Overall, India today is stronger on the external side and the country was able to tide over the contagion effects of the Asian financial crisis of 1997 and the economic sanctions after Pokhran nuclear tests of 1998. The policy is to strengthen reserves with more of non-debt creating investment flows instead of repayable loans.

The rupee-dollar exchange rate has been coming under pressure on account of volatility in international currency markets and unanticipated developments such as the surge in oil prices. Exchange rate management will have to ensure that the rupee does not overshoot or become over-valued with serious consequences for its exports.

A good part of India's reserves is made up of borrowings such as medium-term bonds repayable to NRIs over the next two to five years. India can no longer escape external shocks as its economy gets integrated with the rest of the world. For strong and healthy balance of payments position, India must have high economic growth with stability, improved fiscal balance, moderate inflation and a policy framework in tune with the global developments.

NRI Remittances

Since the eighties, a large number of developing countries have embarked upon liberalisation of their international transactions in invisibles. These cover trade, transportation, insurance, investment and private transfers. Invisibles have become more important with ongoing international efforts to liberalise trade in services.

Invisibles play an important role in India's external sector. Surpluses in the invisible account have provided valuable balance of payments support in the face of external shocks.

India liberalised the exchange rate regime and made rupee convertible for current account transactions in 1994.

Gold imports were liberalised and with

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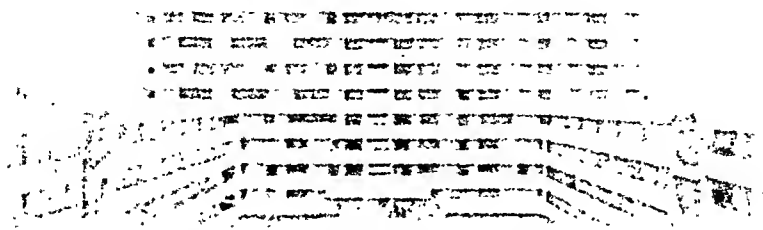
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improvements in the banking system, remittances by Indians abroad were shifted from formal channels (like 'hawala') to the banking system.

Total 'invisible' receipts have been growing especially in the latter half of 1990s. The increases reflect the growing volume of NRI remittances. Total receipts under invisibles, net of payments by India for two-way flows, rose from 1620 million dollars in 1991-92 to 12,935 million dollars in 1999-2000.

Of this, private transfers (mainly NRI remittances) added upto 12290 million dollars. From 1996-97, the transfers were 11-12 billion dollars a year.

Private transfer receipts include current remittances for family maintenance as well as the repatriation of savings by Indians working abroad. Since 1992-93, they also include the inflow of gold and silver brought in by Indians returning from abroad in their baggage. Sixty per cent of the transfer receipts are inward remittances.

IT Sector

Indian software exports touched Rs 28,350 crore (\$6.2 billion) during 2000-01 registering a healthy growth of 65 per cent in rupee terms and 55 per cent in dollar terms over the previous year. India's target is to achieve exports of 50 billion dollars by 2008.

Overall, the Indian IT software and services industry was up 55 per cent at Rs 37,760 crore (\$8.26 billion) during 2000-01, compared to Rs 24,350 crore (\$5.7 billion) clocked in 1999-2000.

The domestic market software sales was Rs 9410 crore during 2000-01 with the growth rate slipping to 31 per cent as against 45 per cent in 1999-2000. Indian software and services exports accounted for 14 per cent of India's total exports of 44 billion dollars during 2000-01.

Software exports in 2000-02 to the US are projected to come down only marginally to 60 per cent and the exports to Europe are expected to grow only two per cent to 27 per cent, according to the National Association of Software and Service Companies (NASSCOM).

The Indian software professionals have created their brand image in the global market. Today, more than 260 of the Fortune 1000 companies, i.e. almost one out of every four

global giants, outsource their software requirements to India. India's software industry has achieved a remarkable distinction for providing excellent quality. A large number of Indian software companies have acquired international quality certification.

India's natural resource in today's knowledge economy is its abundant technically skilled manpower. India has the second largest pool of English-speaking specific professionals in the world today, second only to the US. As on December 31, 2000, the software industry in India employed about 4,10,000 professionals, according to the Ministry of Information Technology.

Government policy is to encourage both software development and hardware manufacturing in the country by creating an appropriate environment. Government has recommended that each Ministry must allocate 2-3 per cent of its Budget on IT promotion, as a move towards integrating IT with Government functioning and e-governance. It would result in delivering better services to the citizen by improving citizen-Government interface and transparent working.

Financial Sector

There has been a phenomenal expansion of the banking and other segments of the financial system in India since the late Sixties following the nationalisation of 14 commercial banks. In the 1990s, the sector was deregulated and has become market-oriented with Government control over the financial system somewhat limited to laying down the broad parameters, and the Reserve Bank of India setting the rules of the game and functioning as the apex regulator and supervisor of the financial system.

Banking is the core of the Indian financial system and commercial banks have the dominant share in total financial assets and are the main source of financing for the private corporate sector. They also channel a sizeable share of household savings to the public sector, mainly Government, through the statutorily fixed ratios and investments in approved securities.

Between 1970 and 2000, bank deposits increased at a compound annual average rate of 17.8 per cent while credit expanded at the rate of 16.3 per cent. Bank investments in government and other approved securities

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recorded growth of 18.8 per cent per annum. Aggregate deposits at the end of March 2000 were Rs 8,13,344 crores while bank credit outstanding on that date was Rs 4,35,958 crores and investments Rs 3,08,944 crores.

In the 1990s, Governments licensed nine new private banks, and with increased diversification in recent years, banks in both public and private sectors have been providing a wide range of financial services. The banking system operating within the ambit of the monetary and credit policy of the Reserve Bank, plays a critical role in the production process by providing credit inputs in line with the sectoral requirements of the economy.

The banking system includes cooperative banks but it is the commercial banks, Indian and foreign, which are dominant in terms of deposits, advances and investments. The public sector banks (in which the Government holds not less than 51 per cent of equity) account for more than four-fifths of the total assets of all scheduled commercial banks.

There are now 106 banking entities—27 in public sector (including SBI and its seven subsidiaries), 45 foreign banks and 34 Indian private sector banks including nine, which came into existence after 1991. There are about 68,000 bank offices spread all over India. The credit-deposit ratio on March 31, 2000 stood at 57.1 per cent as against 54.8 per cent in March 1999.

The banking sector recorded an increase in operating profits to Rs 18,423 crores and net profits (after tax) to Rs 7306 crores in 1999-2000. Foreign and private banks had a higher rate of growth in profitability.

The banking system has been faced with the problem of NPAs (non-performing assets or outstanding dues to banks from borrowers) which stood at Rs 60,841 crores (gross) at end-March 2000 but the net NPAs were only Rs 30,152 crores or 6.8 per cent of net advances. For public sector banks, it was 7.4 per cent and for private sector 5.6 per cent. A number of Debt Recovery Tribunals have been set up to expedite recoveries from borrowers.

Government had made provisions in 1990s for recapitalising some of the banks to help fulfill the capital adequacy norm which was one of the prudential norms proposed for the banking system in the first report of the Narasimha Committee on Financial Sector Reform (1991-92). Government has decided

to introduce legislation to bring down its own shareholding in banks to 33 per cent as the minimum to enable banks to access the capital market at home and abroad and augment the capital base as part of the 'second' generation reforms.

Outside the banking system are the all India term lending financial institutions, which are increasingly moving toward 'universal banking' and have themselves set up subsidiary banks. These institutions have for long been financing industrial development, and other specialised financial institutions have also been set up in the 1990s providing depth to the financial intermediation. Competition has been enhanced by the emergence of new institutions and the segmentation of the financial markets.

Monetisation of the economy gathered momentum after independence with the spread of banking to rural areas and the share of banking and insurance in GDP has moved up to 4.7 per cent from 2.2 per cent in the 1970s. In the Services sector, banking and insurance has a share of nearly 12 per cent.

According to the Reserve Bank, the financial sector development has led to improvement of the economy's saving rate. A large part of the financial savings of household sector is in bank deposits, which accounted for over 16 per cent of gross domestic saving. Insurance, provident fund and pension funds have also become the avenues for financial savings of the household sector in the form of contractual savings.

Monetary Policy in 2001-02

As part of financial sector reform, interest rates which were administered by the Reserve Bank of India were deregulated except for small borrowers in the "priority sector" to give a measure of freedom to banks to charge interest rates which would give them a better return overall. Lendable resources of banks were enlarged with lowering of stipulations in regard to statutory liquidity and Cash Reserve Ratios.

Responding to the corporate sector's contention that high interest rates were a disincentive for investments, the Reserve Bank in October 2001, brought down the Bank Rate, the benchmark for interest rate adjustments, from 7 to 6.5 per cent, the lowest since May 1973. CRR was also reduced to increase

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lendable resources with banks to increase liquidity.

In October, 2001 RBI lowered GDP projection to 5-6% from 6-6.5% due to slow industrial and export growth. The cash reserve ratio (CRR), reflecting cash balances which banks have to park with RBI as a prudential measure, was lowered by an unbelievable 200 basis points to 5.5 per cent—just a little above the 3 per cent level allowed by the law. The lower CRR will release Rs. 8000 crore in the system—a move that will help the government, which is expected to borrow 10-15 per cent more than the target.

State Finances

In recent years, the deterioration in State finances has become a problem of great concern as it has caused a severe erosion in budget support for development and led to large borrowings even to meet current expenditures, mainly salaries to employees and interest payments.

The scenario is indeed bleak for the reform agenda at the state level without which neither the State finances could improve nor would State governments be able to deliver basic services to the people. In present conditions, States are not even able to maintain existing public assets, let alone creating new facilities and expanding infrastructure on the required scale.

Unlike the Centre which had a surplus on revenue account in the budget till 1978-79, the States seemed to be managing their finances relatively better but in the 1990s, they also began to run revenue deficits which increased their gross fiscal deficit to three per cent of GDP.

In the aftermath of the implementation of the higher pay scales as determined by the Centre after the receipt of the Fifth Pay Commission report, the States have come to grief. The fiscal deficit of all states together crossed four per cent in 1998-99 and touched a peak of 4.9 per cent in 1999-2000 while their total outstanding debt to GDP also reached a high level of 21.5 per cent.

The national level of public sector deficit (Centre and States together) crossed the 10 per cent of GDP and this has become an area of concern to international credit institutions. Fiscal restructuring has been given primacy in the reforms they have been urging on India besides many other developing countries.

The Centre is simply not in a position to

bail out any state, for, it is borrowing heavily to meet the massive gaps in revenue-expenditure which have resulted in reduced levels of capital spending. Like the Centre, the States borrow from the market, as agreed beforehand with the Reserve Bank of India, and with increasing borrowings and larger interest payment outgo, the fiscal position of the States can hardly improve without drastic measures such as levy of user charges for all services, widening of the tax base, closure of loss-making enterprises and downsizing of the administration.

Centre-State fiscal relations are governed by the devolution to States of taxes collected by the Centre on the basis of formula worked out by Finance Commissions, which are appointed every five years, as mandated by the Constitution. Till recently, only personal income tax and Union excise were sharable with States in ratios as proposed by the Finance Commission after assessing the revenue and expenditure requirements of States for a five-year period and providing for filling the gaps.

The Tenth Finance Commission (1995-2000) had proposed that all taxes, direct and indirect, levied by the Centre should be shared with states so that the States get at least 29 per cent of the total tax receipts of the Centre. This change in formula has been effected to through a constitutional amendment by Parliament.

The Eleventh Finance Commission (EFC), whose recommendations take effect from 2000-01, has fixed the total share at 29.5 per cent. EFC also recommended a significantly higher level of grants-in-aid to deficit states under Article 275(1) of the Constitution.

On the basis of revenue assumptions related to estimated GDP growth over the five years 2000-05, the States would receive Rs. 376,311 crores by way of tax devolution (or 28 per cent of gross revenue receipts of the Centre). In addition, 1.5 per cent of net proceeds of shareable Central taxes/duties in a year may be distributed among such states, which do not levy sales on sugar, tobacco and textiles during that year. The grants-in-aid would be of the order of Rs 35,359 crores for five years for States (15), which will have deficits even after the devolution of central tax revenue. These amounts will be progressively tapering off after the first year's (2000-01) provision of Rs 10,154 crores.

The recommendations are being impl

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mented by the Centre and the Budget for 2000-01 provided for Rs 52,418 crores (R.E) and the Budget for the current fiscal (2001-02) provides for Rs 61,618 crores as States' share of Central taxes and duties. Over the years, the States have been demanding a larger slice of the national cake, and some of the Chief Ministers, especially the Andhra Pradesh Chief Minister Mr Chandrababu Naidu had expressed reservations over the Eleventh Finance Commission's scheme. He is of the view that Centre should give away 50 per cent of its tax receipts. EFC had set a limit of 37.5 per cent for all transfers, plan and non-plan.

The other major avenue of transfer of Central resources to States is through loans and grants for the Plan via the Planning Commission on the basis of a modified Gadgil Formula. The Central assistance for States/UTs in 2001-02 is Rs 37,640 crores, fifty per cent of which is in grants. In addition, the Centre extends about Rs 8000 crores of grants for the Centrally Sponsored Schemes operated by States.

Both the 11th Finance Commission and the Planning Commission have laid out fiscal reforms for the Centre and the States by which there should be no revenue deficit at the State level while it would be only one per cent of GDP at the Centre in 2004-05. Fiscal deficits of the Centre and States would stand reduced to 4.5 and 2.5 per cent respectively.

The Centre is exerting pressure on States to enter into Memorandum of Understanding which links assistance to progress with reforms. These MoUs were signed by 11 states in 1999-2000, but the budgeted deficit of 3.9 per cent was exceeded and stood at 4.9 per cent of GDP, notwithstanding some efforts by some states to increase revenue and reduce expenditure. Total outstanding debt and other liabilities of States stood at Rs 417,998 crores at the end of March 2000.

International financial institutions like the World Bank and the Asian Development Bank have focussed on state-level reforms and extended loans to States undertaking economic restructuring programmes. The World Bank is assisting Andhra Pradesh and Uttar Pradesh and is extending it to other states including Karnataka. The Asian Development Bank has similar programmes with Gujarat and Madhya Pradesh.

Meanwhile, most States are in a critical situation and are using plan funds for payment of salaries. With negative contribution from

budget for state plans, State governments' been borrowing more and more to finance non-plan revenue expenditures rather than capital expenditure. If reckless borrowing is kept in check, the Planning Commission warns, some states may be forced to declare financial emergency in the 10th plan.

Plan Progress

Ninth Five-Year Plan (1997-2002):

Ninth Five-Year Plan (1997-2002) with a phase of deceleration of the economy from 1997-98, and GDP growth fell targeted 6.5 per cent on average. Growth in the first four years (1997-2001) were 5.6 and 6 per cent respectively giving an average of 6.1 per cent. Not only growth rates in agriculture and industry but also foodgrain and production targets could not be met.

Domestic savings and investment performance belied plan assumptions, mainly due to Government dis-savings despite the satisfactory trend in household savings (19.8 per cent of GDP). Decline in aggregate demand, lack of new investments and a competitive environment depressed the manufacturing sector and a fairly steady services sector helped sustain GDP growth at six per cent.

The dismal performance in exports in the first two years gave place to a strong revival in the subsequent two years ending March 2001, so that an eight per cent average could be achieved. Overall, the inflationary pressure could be contained within the 5 to 6 per cent range despite revision of petroleum product prices (March 2000) due to the surge in international oil prices. With modest flows of external capital, mainly foreign direct investment and portfolio flows, together with Treasury bonds floated for NRI subscriptions and foreign currency deposits, India's foreign exchange reserves (other than gold and SDRs) were steadily rising and stood at 45 billion dollars as on October 19, 2001.

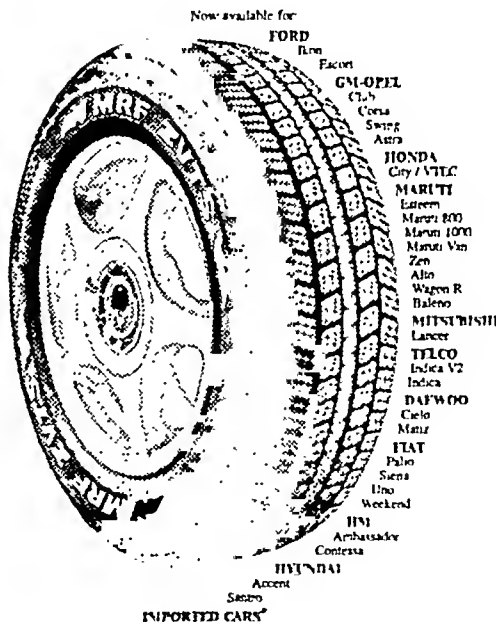
India's balance of payments position in the Ninth Plan Period continued to be favourable with the steady building of reserves throughout the decade. The current account deficit was contained within 1.5 per cent of GDP because of substantial inward remittances by Indians abroad and other invisible receipts.

The growth outlook for the final year of the Ninth Plan (2001-02) was mixed, because of halt in industrial recovery while a normal monsoon



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in 2001 was likely to improve agricultural prospects. Helped by the buoyancy of the Services sector, GDP growth was estimated at 6 to 6.5 per cent in 2001-02.

Even a six per cent average growth through the 1990s has not generated employment in the organised sector. Job opportunities have largely occurred in the unorganised sector, in urban and rural areas. Liberalisation and advances in information technology sectors have however created more demand for skilled professionals.

Tenth Five Year Plan (2002-2007): It is against the background of a deceleration in the primary and secondary sectors of the economy in the Ninth Plan period (1997-2002) that the Planning Commission has proposed an outline of the Tenth Plan (2002-07), with emphasis on corrective measures of a drastic nature to enable Government to increase investments. It also sets down a tough reform agenda for the economy. Fiscal deterioration, unemployment, lack of headway in infrastructure development and industry and inter-state social disparities are the areas of concern which have to be addressed with determination.

On the social side, poverty remains pervasive, the infant mortality rate has stagnated at 72 per 1000 for several years, the literacy rate is still low though improving, and sixty per cent of rural and 20 per cent of urban households have no power connections. The Planning Commission has proposed specific and "monitorable" targets such as reduction of poverty ratio to 20 per cent by 2007 (from the present 26 per cent, according to one estimation and 36 per cent another), provision of gainful employment for addition to labour force dur-

ing the plan period, increase in literacy rates to 72 per cent by 2007, and provision of drinking water to all villages by 2012.

The Tenth Plan will aim at GDP growth at 8 per cent, a target, which is ambitious in relation to current trends. Though savings and investment rates did not move up in the Ninth Plan, the outline paper proposes fairly high targets for domestic savings (29.8 per cent of GDP) and investment (32.6 per cent) as against the 23-24 per cent in the final years of the Ninth Plan.

The underlying assumption is that as the country moves toward a market economy, there would be increase in the savings rate of private corporate sector. But the Central Government would have to reduce revenue expenditure and fiscal deficit to be able to generate 1.7 per cent of GDP as savings against the current dis-saving. Another 2.9 per cent of GDP would be the contribution of public enterprises.

The overall growth rate (8 per cent) is based on agriculture and industry recording increases by 4.5 and 10 per cent respectively in the five-year period.

The thrust of the plan is on accelerating the process of reform over a wide front instead of merely being a resource allocation plan. Both the Centre and States would have to raise their tax-GDP ratio by widening the base of taxation. Revenues can grow by bringing the Services sector—which contributes more than 50 per cent to GDP—along with goods under a value added tax at the national level.

Other measures considered essentially by the Planning Commission are speedy completion of ongoing projects, faster privatisation to yield Rs 16,000—17,000 crores a year and spreading reforms to agriculture and labour relations.

Financing Targets for the Tenth Plan (2002-07)

	Base Year	Target
Average GDP growth rate (% p.a.)	6.50	8.00
Gross Investment Rate (% GDP)	27.00	32.60
ICOR (Input-Capital Output Ratio)	4.28	4.08
Current Account Deficit (% GDP)	1.50	2.80
Gross Domestic Savings (of which)		
Public Sector (%GDP)	26.30	29.80
Government	2.40	4.60
Public Enterprises	-0.60	1.70
Private Corporate Sector	3.00	2.90
Household Sector	4.90	5.80
	19.00	19.40



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Globalisation

Globalisation is the process of integration of world's economies in conditions of freer flows of trade and capital and movement of persons across borders, facilitated by new technologies for instant communication of information. More than 1.5 trillion dollars is exchanged in the world's currency markets functioning 24 hours a day. Nearly 40 per cent of global output of goods and services is traded.

The world has seen periods of economic integration in the latter half of 19th century and early part of the 20th century. Massive migrations had taken place from Europe and Asia to North and South America. Trade expanded in the 19th century and new technologies of steam power and telegraphs and telephones brought goods and people closer together. The World Bank records this process was interrupted by wars, economic depression, protectionism and restrictions on the movement of people in the 20th century till almost the 1970s.

Internationalisation of production has been taking place over the last few decades through the Multinational Corporations (MNCs), which operate with tens of thousands of affiliates. Their sales in 1998 were of the order of two trillion dollars, almost one-third of the world trade in merchandise.

As tariff and other barriers are getting lowered, trade is expanding, transport and communication costs fall, and technologically advanced enterprises move to different locations, globalisation is turning the whole world into a common village. The era of globalisation, which gained momentum in 1990s, has opened up new opportunities for countries, developed and developing, but also poses serious risks to countries which are unable to reform their own markets and become internationally competitive.

Notwithstanding the risks and challenges flowing from globalisation, no single country, nor even a group of countries even if they act together, would be able to arrest the march of liberalisation and globalisation.

Global trade rose to 6.2 trillion dollars in 2000 as against 3.4 trillion in 1990. World trade has been growing faster than world out-

put. Developing countries including India shared one of the fastest growth in world trade in 2000 of 12.5 per cent. The oil price surge to 28 dollars a barrel contributed to the rise in the value of world trade but inflation in both developed and developing countries remained fairly subdued during the year.

The end of the 'cold war' in 1990 set the stage for most developing countries to liberalise their economies and undertake structural reforms aimed at higher growth of their economies and create a climate for attracting foreign investments to supplement domestic resources.

Resource flows of all types to developing countries increased from mid-1990s, even as official development assistance was declining. Private capital flows of all forms to developing countries were 299 billion dollars in 2000. Of this, Foreign Direct Investment (FDI) flows to developing countries totalled 178 billion dollars. They have averaged 170 billion dollars since 1996. China and Brazil are the first and second largest recipients of FDI. China has been receiving 40 billion dollars as against India's two to three billion dollars through the past decade. Worldwide more than one trillion dollars of FDI flows were recorded in 2000. Of this, 800 billion dollars of FDI flowed to developed economies which are also the source for outflows of capital.

The might of MNCs has triggered legitimate concerns in developing countries as to how far they would be able to further their own development objectives and priorities while keeping their economies open and compete in the international market on fair terms. Conversely, there are also some concerns in developed countries as to whether increased exports from low-wage countries, as trade liberalisation keeps progressing, would affect employment of the less-skilled in their workforce. Some of these concerns have already found violent expression in anti-globalisation riots in USA and Europe, over the last two years though the lead is taken by environmental groups in richer countries.

Advances in electronics and telecommunications have integrated the world's capital and

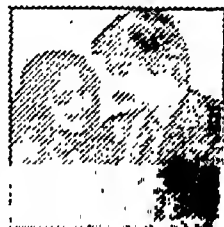
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financial markets to a large extent. Even as investors look for higher returns and portfolio diversification, developing countries must be able to ensure through exchange rate and other policies and mechanisms that the capital flows are managed such that the country benefits and risks of outflows are contained without serious destabilising consequences. There are as yet no international mechanisms to regulate capital flows and countries face risks of capital outflow if there are slippages in domestic economic management or grave weaknesses in the financial system.

In trade, the Uruguay Round Agreements to which 100 developing countries including India became signatories, have limited the options available to countries in promoting their interests. The obligations undertaken include not only drastic reduction of Import tariffs but also removal of non-tariff barriers, specially quantitative restrictions (QRs) on imports of consumer goods. India has fully complied with the requirement. There are other stringent obligations regarding patent protection and trade-related investments. In all these areas, countries are bound by the agreed rules and disciplines, the observance of which is monitored by the World Trade Organisation (WTO).

Though market forces are taking over command of economies, and the role of public sector is diminishing in most countries, the state can play an effective interventionist role in promoting efficient production, improving access to markets, facilitating technological upgradation, and providing the necessary conditions for the healthy functioning of markets which should be well-regulated. These are all yet in the realm of discourse with few countries putting in place the safety nets.

There are no doubt visions of major developing countries like China and India becoming superpowers in the 21st century. The World Bank has classified India along with China and three other developing countries as the "Big Five", whose role in world economy is likely to increase dramatically over the next two decades. It says these countries' share of world GDP could nearly double by 2020. Even with an average GDP growth of 5.8 per cent, India's share of world real GDP would move up to 2.1 per cent from the one per cent in 1992. Similarly, India's share of world exports is expected to improve from 0.8

per cent in 2000 to 3.9 per cent by 2020. China would be far ahead by then with 3.9 per cent of world GDP and 9.8 per cent share of world exports.

Meanwhile, there are immense challenges for developing countries to overcome as they go along on the road to globalisation. India's place will be determined by its ability to tackle poverty and unemployment effectively and raise the levels of education and health for the over one billion population. But economies can no longer remain insular and will be totally marginalised and isolated, unless they become internationally competitive and remain efficient in resource use and productivity. These objectives call for many structural reforms and meeting the challenges on the way.

While India may have rejected export-led growth strategy in the past as unsuited to a large country, the world has come a long way with trade growing faster than output and massive amounts of capital freely flowing across borders. The technological discoveries in the second half of the 20th century have knit the world so much that even the concept of nation-state itself is becoming irrelevant. Countries have shown willingness to surrender part of their sovereignty to abide by international rules and also promote powerful regional trade and economic groupings with a determination to stake their share in global prosperity. Can India lag behind?

Impact of Globalisation

According to a UN study in 1999, the era of globalisation is opening many opportunities for millions of people around the world. Increased trade, new technologies, foreign investments, expanding media and Internet connections are fuelling economic growth and human advance. All this offers enormous potential to eradicate poverty in the 21st century.

Today's globalisation is being driven by market expansion (opening national borders to trade, capital, information) which is outpacing governance of these markets and their repercussions for people. More progress has been made in norms, standards, policies and institutions for open global markets than for people and their rights. "Competitive markets may be the best guarantee of eff



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ciency, but not necessarily of equity. Markets are neither the first nor the last word in human development. Many activities and goods that are critical to human development are provided outside the market—but these are being squeezed by the pressures of global competition." When the market gets out of hand, the instabilities show up on boom and bust economies, as in the 1997 financial crisis in East Asia and its worldwide repercussion, cutting global output by an estimated \$2 trillion in 1998-2000.

The challenge of globalisation in the new century is not to stop the expansion of global markets but one of setting rules and institutions for stronger governance—local, national, regional and global—to preserve the advantages of global markets and competition, but also to provide enough space for human, community and environmental resources to ensure that globalisation works for people—not just for profits.

This is easily said than done. At present, for many developing countries including India, the risks outweigh advantages and opportunities under globalisation. For instance, in India the 1990s has seen more retrenchment as firms downsize or merge to stand the rigours of competition. This is happening in a milieu when GDP growth is not generating jobs. Trade liberalisation has unavoidably resulted in flood of cheaper imports into the country which hurt local manufacturers.

Globalisation has also impacted on income levels with the rich getting richer, given their ability to adjust easily to a new environment, and the poor becoming poorer. Even developed countries are no exception to income inequalities in the wake of spread of globalisation processes. There is thus a growing tide of opinion at the people's level which is one of resistance to externally-imposed disciplines. There are equally concerns, whether in the WTO negotiations on agriculture, services and patent protection, developing countries would get a fair deal to safeguard their development and a level playing field in trade exchanges or movement of service personnel. More basic concerns relate to the ways in which the rapid spread of communication and images might affect people's lives and traditional cultures and drive countries to conformity to a single pattern.

Overall, the international community not moved decisively till mid-2001 to evolve new economic order, which is more equitable to all, nor it had gone far in creating a financial architecture which will ensure stability in the movement of key currencies and orderliness in the worlds' financial markets.

Structure of World Economy

In 2000, all advanced economies had a share of 57.1 per cent of world output and 75.7 per cent of global exports of goods and services. Of them, USA and six other major industrial countries account for 45.4 per cent of global output and 47.7 per cent of trade.

Developing countries' share of output and trade was 37 per cent and 20 per cent respectively. Region wise, Asia has the largest share among developing countries with 21.6 per cent of output and 9.2 per cent of trade. The share of China and India are 11.6 and 4.6 per cent in output and 3.7 and 0.8 per cent in exports respectively. The share of countries in transition like Russia and Central Asia is 5.9 per cent in output and 4.3 per cent in trade.

The Value of World Output

The value of world output at market exchange rates has been rising and is estimated by IMF at 31.4 trillion (31,400 billion) dollars in 2000 against 24.4 trillion dollars in 1994. From an annual average of 18 trillion dollars in the period 1983-92, world output value rose to an average of 29.6 trillion dollars in 1993-2000. Global output grew at the rate of 3.4 per cent in 1983-92 and 3.6 per cent in 1993-2000. World trade outpaced GDP growth at the rate of 4.5 per cent in 1980s and 7.5 per cent in 1990s.

Dimensions

The dimensions of globalisation can be seen in the rapid growth in world GDP, trade and capital flows, the widening reach of multinational firms, and the wave of mergers and acquisitions among entities engaged in production, transportation, marketing or financial services.

Total trade rose to 6.2 trillion in 2000 while foreign direct investment flows exceeded 3 trillion dollars—a 14 per cent increase over 1999, bulk of which went to developed countries (899 billion dollars) while developing countries received 190 billion dollars and Central and Eastern Europe 30 billion dollars.

cut, all designed to lift the economy out of a prolonged slowdown. Since USA has been the largest market for developing countries, the growth rate for the latter has been scaled down five per cent though for developing Asia, it is projected at 5.9 per cent (China 7 per cent and India 5.6 per cent). In view of the slowing of the world economy, WTO has forecast a volume growth decline in trade to 7 per cent in 2001 from the 12.5 per cent in 2000. International capital flows were also expected to remain subdued in 2001.

Oil prices continued to remain high (28-29 dollars a barrel) in the first half of 2001 without the expected stabilisation at 25-28 dollars. Developing countries, substantially dependent on oil imports, are going through a period of difficult adjustment to higher oil prices since the beginning of 2000.

Global Institutional Framework

1. International Financial Institutions

International Monetary Fund (IMF)

The IMF, with a membership of 183 countries, was established by the Bretton Woods (New Hampshire) Conference in July 1944 to promote exchange rate stability, balanced trade in international trade, the establishment of a multilateral system of payments, and to provide temporary financial assistance to Fund members with balance of payments problems—with the intention of lessening the threat to the international system.

In the mid-1980s, the Fund began providing concessional assistance to the poorest countries, with the launching of the Structural Adjustment Facility (ESAF). In 1999, the ESAF was expanded and renamed the Poverty Reduction and Growth Facility (PRGF). IMF at present operates a debt relief programme for the Heavily Indebted Poor Countries (HIPC), mainly in Sub-Saharan Africa.

IMF has a capital base of 300 billion dollars contributed by member countries, each having a quota. The United States has by far the largest quota equal to 17.63 per cent. This gives the United States voting rights in the IMF Executive Board that enable it to veto certain major policy issues such as quota increases and amendments to the IMF's Articles

of Agreement. The next largest quotas are held by Japan with 6.32 per cent, Germany 6.17 per cent, and France and the United Kingdom each with 5.1 per cent.

World Bank Group

The World Bank (182 members) was also founded in 1944 at the Bretton Woods conference, named as the International Bank for Reconstruction and Development (IBRD). Its sister organisations are the International Development Association (IDA), International Financial Corporation (IFC), the Multilateral Investment Guarantee Agency (MIGA) and the International Centre for Settlement of Investment Disputes (ICSID).

The World Bank Group (including IDA and IFC) approves loans, soft credits totalling about 20-21 billion dollars every year (July-June). The World Bank Group's capital base is made up of contributions by member countries. USA has the largest share—about 17 per cent—which gives the United States the power to veto any changes in the Bank's capital structure and operational strategies.

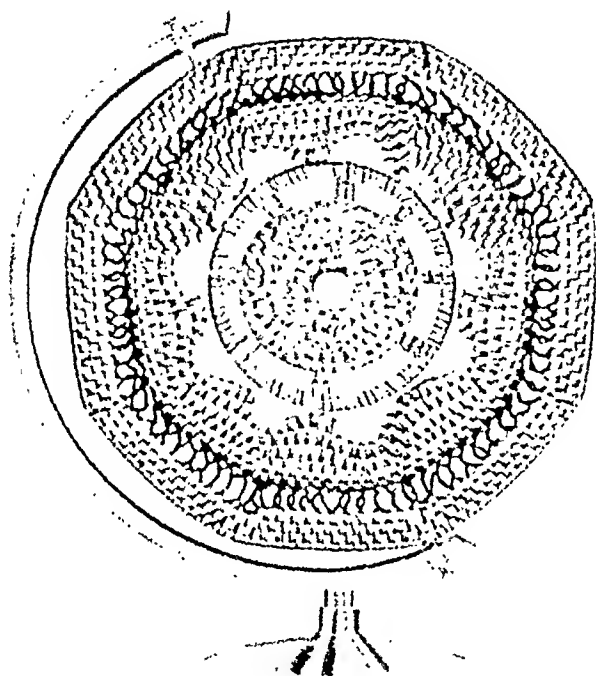
International Development Association (IDA)

IDA is the World Bank Group's concessional lending window. It provides long-term loans at zero interest to the poorest developing countries, i.e. countries with a per capita income in 1999 of less than \$885. At present, 78 countries are eligible to borrow from IDA. Together these countries are home to 2,300 million people, comprising 53 per cent of the total population of the developing countries. Today, 1,500 million of these people survive on incomes of \$2 or less a day. India and Indonesia are eligible for IDA assistance due to their low per capita incomes, but they are also creditworthy enough for IBRD borrowing. IDA credits to poor countries totalled over 120 billion dollars till June 2000.

International Finance Corporation (IFC)

The IFC, established in 1956, assists private sector activity in developing countries by financing projects with long-term capital in the form of equity and loans. It helps companies in the developing world to raise funds in international financial markets and provides advice and technical assistance to businesses and governments. IFC charges market rates for its products and does not accept govern-

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Census of India, provisional results for the State of Bihar
 Atal Bihari Vajpayee (R) is Viceroy of India in New
 Delhi, 09 February 2001. The census shows the population in
 the first census in a decade. Bihar has a population of 105 million
 villages and 500,000 households. The population of the
 month.

still higher than the assumptions ranging from 1.6 to 1.8 per cent made by the Planning Commission and other organisations. India's population growth over the last decade was one per cent. Foodgrain production in the decade at 1.9 per cent roughly matched the population growth.

The over 1027 million population comprised 531,277,078 males and 495,738,169 females. The sex ratio of 933 females per 1000 males was an improvement over the 1991 figure of 927.

Both in annual growth rate and sex ratio, there are wide variations among the States during the decade 1991-2001.

Bihar has recorded the highest increase in the percentage decadal growth from 23.38 during 1981-91 to 28.43 during 1991-2001. The lowest growth rate was recorded in Kerala (9.42 per cent), followed by Tamil Nadu (11.19) and Andhra Pradesh (13.86). Andhra Pradesh has shown the sharpest decline among the major states i.e. from 24.20 to 13.86 per cent.

Almost half of India's population lives in five States, Uttar Pradesh, Maharashtra, Bihar, West Bengal and Andhra Pradesh. Uttar Pradesh continues to be the most populous state with 16.17 per cent of India's popula-

tion followed by Maharashtra (9.42 per cent) and Bihar (8.07 per cent). The population of Uttar Pradesh (166 million) alone exceeds the estimated population of Pakistan. Interestingly, almost two-thirds of India's population live in States and Union Territories which show decline in growth rate during the decade 1991-2001.

States, which have not recorded any fall in population growth, are Bihar, Rajasthan and Uttar Pradesh. The net addition to population in the decade 1991-2001 showed a significant drop in Andhra Pradesh, West Bengal, Kerala and Tamil Nadu.

India now has 57 more persons per sq.km as compared to 1991. West Bengal is the most densely populated

state in the country with 904 persons living per sq.km, followed by Bihar with 880.

The following Table gives the growth of population during the twentieth century, average growth and the density of population

Literacy

A heartening feature is the impressive rise in the rate of literacy from 52.21 per cent in 1991 to 65.38 per cent in 2001 (75 per cent for males and 54 per cent for females). This means that three-fourths of the male population and more than half of the female population is literate. This brings down the gap in male-female literacy rates from 28.84 in 1991 to 21.70 in 2001.

Kerala has maintained its unique lead in population control and literacy level. Its annual growth rate dropped to 0.90 in the decade, well below the national rate of 1.93 per cent. Tamil Nadu followed with a growth rate of 1.06 per cent and Andhra Pradesh 1.30 per cent. Literacy rate in Kerala is 90.92 per cent. Bihar recorded the lowest literacy rate of 47.53 per cent.

At the national level, over 203 million people, including 95.6 million females, turned literate in the decade of 1991-2001 and the total number of illiterates came down in 2001 to a little over 296 million (190 million fe-

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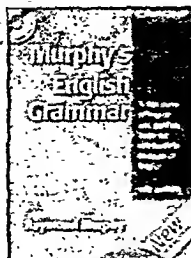
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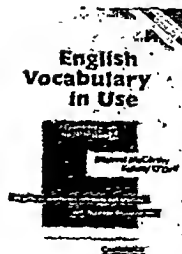
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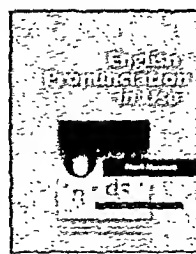
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In a span of 11 minutes, seven bombs ripped through the packed first class compartments of commuter trains in Mumbai, during the evening rush hour on July 11, killing more than 180 persons and injuring 700.

It paralysed the city and rendered hundreds of people on railway stations and roads, as the Western Railway service was shut down for five hours. But in less than 24 hours the trains that form the transport lifeline of one of the world's most congested cities were again bustling. And once again the people of Mumbai bounced back and millions of commuters started traveling in over-crowded trains as usual. "This is living proof of our contempt for terrorism. No one can make India kneel. No one can come in the path of our progress." - Prime Minister Manmohan Singh said in an addressed to the nation.

Mumbai was no stranger to terrorist attacks, having witnessed its worst in 1993, when bombs placed outside hotels, banks, the Air India building, and the Bombay Stock Exchange exploded leaving more than 250 dead and around 1400 injured.

The banned Students Islamic Movement of India (SIMI) was one of the prime suspects in the Mumbai train blasts. Originally set up as a students organisation in the early 1980s, SIMI got embroiled in allegations of involvement in riots across Maharashtra and was banned in 2001. Subsequently it is believed to have joined outfits like Pakistan-based Lashkar-e-Toiba. Analysts compared the attack with the mass transit bombings in Madrid in 2004 and London in 2005.

Two bomb blasts in Varanasi on March 7 killed 38 people and injured more than a hundred. The first was in the Sankatmochan temple in which several people including the priest and participants of an ongoing wedding were killed. The second was at the Varanasi railway station. Further casualties were prevented because bombs discovered at other spots were defused in time. For these

incidents also the Lashkar-e-Toiba was blamed. Within hours two top LeT operatives were killed in a police raid in Lucknow.

At least 31 people were killed and more than 200 seriously injured when three powerful explosions rocked the communally sensitive town of Malgaon in September. The blasts took place almost simultaneously in the graveyard of the Noorani Mosque and the busy Mushaira Chowk and Ayeshanagar locality. Thousands of people had assembled at the graveyard for prayers on the holy day of Shab-e-Barat. The people who had gathered in the mosque for Friday prayers were also among the casualties. The blasts were termed as terror attack aimed at creating communal tensions between Hindus and Muslims.

Tough Time for Natwar Singh

The going got tough for the former external affairs minister Natwar Singh following the publication of the findings of Justice Pathak Committee which inquired into the Volcker Commission Report relating to the United Nations Oil-for-Food Progra-



Natwar Singh

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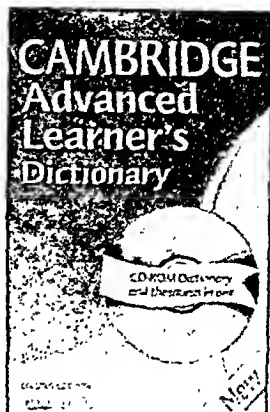
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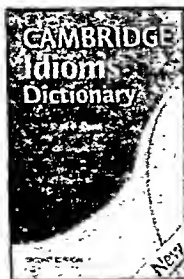
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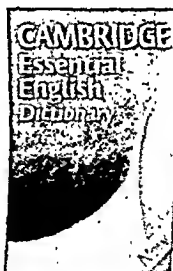
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mme. The Committee found that Natwar, as head of the Congress foreign affairs cell had misused his position to get oil contracts from the UN-sanctioned Saddam Hussein regime for his son's friend Andaleeb Sehgal's Hamdaan Exports. However the report made it clear that neither Natwar nor his son Jagat had received money from anyone. The report also said that "there is not a shred of evidence to link the Congress Party to the said transactions".

The leakage of the report before it was presented to the prime minister was condemned by the opposition parties as well as Natwar Singh. He filed a breach of privilege notice against the prime minister and even criticised him in public. He was promptly suspended from the Congress.

The Volcker report released in October 2005 had said that Natwar and the Congress Party had paid illegal surcharges to the Saddam Hussein regime in Iraq to secure four million barrels of oil which they had later sold in the international market through a Swiss company for a profit. Subsequently, Natwar lost his job as the external affairs minister, but was retained as minister without portfolio. Later he was removed from the Congress Working Committee and had to resign from the Union Cabinet.



Pramod Mahajan

his Mumbai apartment in April 2006, and later explained that he took revenge for years of humiliation by his brother. He surrendered to the police and was taken into custody.

Pramod Mahajan, who was born in a small town Maharashtrian middle-class family, came to public life through the ABVP and RSS. He attracted national notice in the 1980s when he masterminded the BJP's first and till now most successful alliance with the Shiv Sena. He served first as the minister for information and broadcasting and later as the minister of information technology in the NDA government headed by the BJP leader Atal Bihari Vajpayee at the centre.

After the NDA lost power, he became one of the six general secretaries of the BJP. Close to big industrialists and businessmen, he was considered to be the biggest fund raiser for the party. He was anointed by Vajpayee as the BJP's Lakshman, meaning heir apparent.

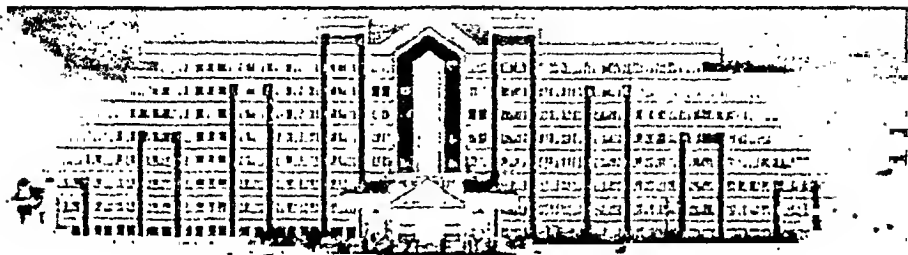
The tragedy struck the Mahajan family again in June when Pramod's son Rahul was carried unconscious to a hospital from his Delhi official residence of his father. Pramod's personal secretary Bibek Meena was found dead due to over dose of cocaine.

The Mahajan Tragedy

One of India's most articulate and resourceful politicians was cut down at the peak of his career. After a valiant 12-day battle for life in a Mumbai hospital, the BJP general secretary and former union minister Pramod Mahajan, 57, succumbed to the injuries he suffered from the gun shots by his own younger brother Praveen Mahajan.

Praveen shot him at point blank range in

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They had come to Delhi on their way to Guwahati on the next day to immerse Pramod's ashes in the River Brahmaputra. Rahul was arrested on charges of procuring, consuming and distributing drugs and destruction of evidence.

Koda's Turn in Jharkhand

In a rare incident, an Independent MLA became chief minister of a state. Madhu Koda, 35, formed a coalition government in Jharkhand in September 2006, with the support of the United Progressive Alliance consisting of mainstream political parties such as the Congress and the Rashtriya Janata Dal.



Madhu Koda

Reflecting the political flux in Jharkhand, he is the state's fifth chief minister in less than six years of its existence.

Koda's rise to power followed the collapse of the 18-month old Arjun Munda-led National Democratic Alliance government after it was reduced to a minority in the wake of resignations of four ministers.

Koda had contested the February 2005 elections as a rebel BJP candidate. But within

a month he returned to the NDA fold, offering his support to the Munda government in return for a ministerial berth.

A new Era in Sino-Indian Ties

It was a dawn of a new era in Sino-Indian relations when the famous Himalayan pass on the border between the two countries was reopened in July 2006, after a gap of 44 years. It demonstrated the determination of both nations to push forward economic and political cooperation despite the border dispute between them remaining unsettled.

The 4,500 meter high Nathula pass which runs between India's Sikkim state and China's Tibet Autonomous Region was once part of the historic Silk Route that connected China with India, West Asia and Europe. It used to account for 80 per cent of Sino-Indian border trade before it was closed after a brief border war in 1962.

The reopening of the pass came a little over a year after China accepted Sikkim as part of India and India recognised Tibet as part of China. China is India's second largest trading partner only after the US. Trade through Nathula pass though on a small scale in the beginning is expected to boost the economies of the land-locked mountain regions of both countries.

Left Sweeps in Bengal

The Assembly elections in April-May 2006 placed the Communist Party of India (Marxist)-led Left alliances in their strongest ever positions in West Bengal and Kerala. In West Bengal, the Left Front which had in power for 29 years since 1977, was elected for the seventh consecutive time, with a whooping three-fourths majority.

While the Left Front won 235 of the 294

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Review of 2006

Sachidananda Murthy

Resident Editor, The Week & Malayala Manorama, New Delhi.

The year 2006 was one of sharp contrasts. While the UPA government remained stable, political class was rocked by controversies. Even as the economy grew rapidly, suicide of farmers and growing rich-poor gap rang the alarm bells. serial blasts on Mumbai trains and attack on temple in varanasi kept the nation on its toes, and relations with Pakistan became tense. An aggressive Prime Minister showed a new face, but was hobbled by the fetters put by allies and supporters on disinvestment and civilian nuclear deal with the United States, even as George Bush had a high profile visit. Reservations in higher education became a tough chestnut for the government to handle. The main opposition party was hit by the murder of its chief fund raiser, poor electoral performance, an ineffective rath yatra and a mole charge which backfired.

Parliament was in locus as controversies and scandals rocked the edifice to its foundations. Even as Parliament was recovering from the controversy of the MP s who were trapped in the cash for questions scandal, the latest crisis took everyone by surprise. The political system got jolted with the disqualification of Jaya Bachchan, the Rajya Sabha member of Samajwadi Party and it triggered off an avalanche of petitions against members of parliament holding unexempted offices. the controversy sucked into its vortex major politicians like UPA chairperson Sonia Gandhi, Prime Minister Manmohan Singh, Lok Sabha Speaker Somnath Chatterjee and also triggered a constitutional standoff when presi-

dent A.P.J. Abdul Kalam became the first occupant of Rashtrapati Bhavan to return a bill to Parliament for reconsideration.

The Office of Profit issue

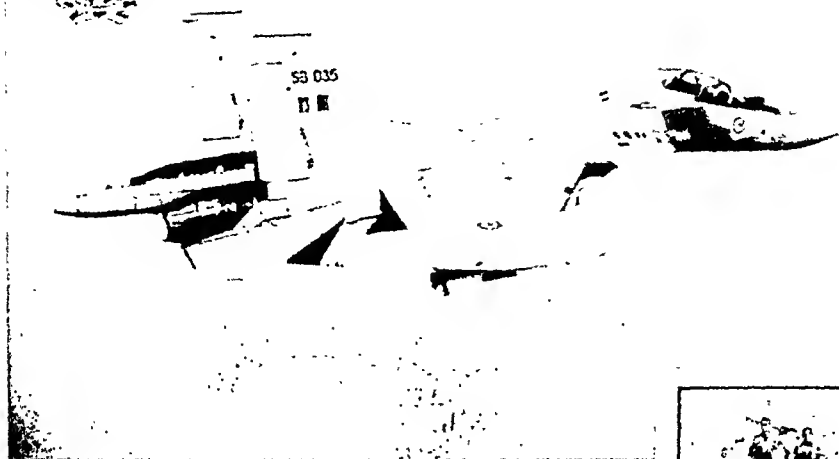
Stung by the allegations that she was occupying an office of profit as chairperson of the national advisory council, Sonia resigned from the lok sabha, saying her inner voice had advised her to give up the post. She won the byelection with a bigger majority which made her supporters call her a true martyr. Other MPs, including Chatterjee refused to resign, and instead the UPA and its outside supporters pushed for a change to a 47 year old law on offices which are exempted.

The country debated on the need to separate executive power from Parliamentarians. Over the years nobody cared for this provision and MPs took jobs which conflicted with their job as lawmakers. The situation was worse in states as chief ministers would appoint every MLA, who could not be made a minister to posts with the rank and privileges of cabinet minister.

The Election Commission concluded Samajwadi Party MP Jaya Bachchan had enjoyed the privileges and powers of chairman, Uttar Pradesh Film Advisory Council she was disqualified from Rajya Sabha. Political rivals rushed with complaints against their foes, targetting Sonia, Chatterjee and 50 other MPs. the government moved fast with a bill to amend the law on office of profit, exempting 43 posts, including NAC, the Srishantiketan Development Authority



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democratic stability and economic prosperity. The King's iron handed approach achieved what was thought to be impossible till now - unity between the political parties and the Maoist forces. They found a common symbol of hatred in the King, who had held all political and military power. But as people poured into the streets, Gyanendra was forced to restore the Parliament which he had sacked and appoint veteran G P Koirala as the prime minister. The Parliament promptly stripped all powers of Gyanendra and jailed his ministers.

Violence rocked Sri Lanka as the ceasefire between the army and the Liberation Tigers of Tamil Eelam collapsed. While LTTE resorted to political assassinations in the capital Colombo, the army began a ruthless operation to drive Tigers out of their hard won territory. The peace process, brokered by Norway and supported by India, collapsed as Norwegian monitors withdrew from the ceasefire zones.

Hardliner President Mahendra Rajapakse also moved fast to consolidate power by ousting his predecessor Chandrika Kumaratunge from the key posts of the ruling party. India, ever sensitive to the plight of the Sri Lankan Tamils and its impact on the domestic situation, urged Rajapakse to work towards a federation which promised justice and equity to the Sinhalese and Tamils.

The share market continued its dizzy climb as it crested the 12,000 mark and money flowed into the market. Trade improved and foreign direct investment increased in the non traditional areas. Big investors were steel giants Lakshmi Mittal and Korea's POSCO. The government boldly talked about making the rupee float free within five years. Even as the economy boomed, trade relations developed slowly with the neighbourhood. But the booming economy also saw the shame of hundreds of farmers committing suicides in the Southern states and Maharashtra, as they

were unable to get out of the debt trap. Special packages were given by Singh, but the agrarian crisis needed much more effort. Despite the government announcing increase in rural sector and other ameliorative steps, there were concerns that it was not enough. After a long time, the country imported wheat, as the rise in prices of pulses and petroleum products put pressure on inflation.

The South Asian Free Trade Agreement amongst the SAARC countries did not take off, because of Pakistan's reluctance to give Most Favoured Nation to India. SAARC grew with the membership given to Afghanistan and observer status to China and United States. The Free Trade Agreements with Thailand and Singapore too suffered due to concerns on various issues, though Manmohan Singh has made it a part of his trade policy. But economic ties with the Arab world, which had been tepid since the Babri Masjid demolition and the Iraq war, improved dramatically as Saudi King Abdullah made a historic visit to India and a host of leaders from the region came to New Delhi, sometimes first to Bangalore and Hyderabad to see the IT revolution.

However Iran was not enthusiastic about greater oil and gas links with the UPA government, as it was peeved about New Delhi voting against Tehran on Iran's nuclear programme. But Manmohan Singh was clear that India did not want another nuclear weapon state in the neighbourhood and was sure that Iran would calm its anger against India.

Nuclear issues dominated Parliament because of the treaty planned with United States, which was cemented during the visit of George Bush, after a few last minute glitches. The deal got the approval of the US Congress, but the conditionalities suggested by American lawmakers made the Indian nuclear scientists and the opposition parties see an attempt to shackle India's nuclear



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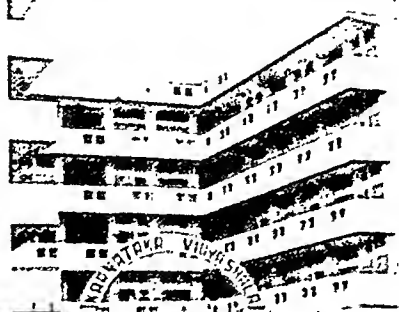
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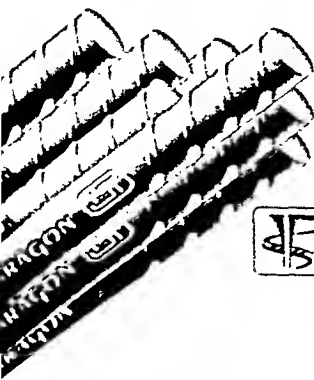
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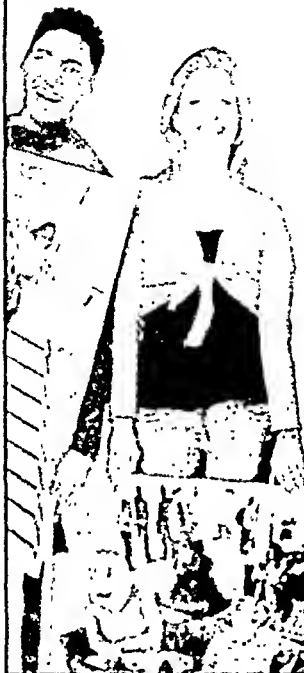
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600,000 more people to quit smoking from 2007 • French President Chirac orders the asbestos-lined warship Clemenceau back home • Dalai Lama's envoys are in China for secret talks on more autonomy for Tibet • Bird flu deaths reach 91 worldwide; **16.** Dead swans in Germany are found carrying the strain of H5N1 • US Vice President Dick Cheney takes responsibility for accidentally shooting a fellow hunter • After five days of protests over election results, Rene Preval, a champion of the poor, is declared President of Haiti • UN says 1200 people are dying in DR Congo everyday from war-related causes • Pakistan's Asif Ali Zardari is declared a proclaimed offender by a court • Army helicopters bomb rebel positions in Nepal's mountainous districts • Turkmenistan to supply 3.2 b.c. feet gas per day to Pakistan • Iran orders enquiry into claims that a police death squad has been operating in the country • Pakistan not to allow import of items from India other than the 773 permitted under the 'positive list' • France says Iran's nuclear programme is a 'clandestine military' project • China accuses the Dalai Lama of 'internationalising' the Tibet issue • Thousands rally against Prophet cartoons in Pakistan; **17.** French actress Eva Green chosen as the new James Bond girl • Japanese economy grew at 5.5% annual pace in the fourth quarter • Bird flu reported in Slovenia, Germany discovers 10 more cases, followed by two more in Greece, one more in Austria; Middle East and Africa alerted • EU opens up service industries like plumbers, hairdressers, etc. • Ismail Haniya, Hamas leader in Gaza, tipped to become Palestinian Prime Minister • Philippines landslip kills about 2000, a village is wiped out • Rebels say oil firms must leave Nigeria; **18.** Philippines landslide toll put at 1800 • 11 killed in protests against Prophet cartoons in Libya • A 62-year-old woman of Redding, USA gives birth to a 2.3 kg baby, her 12th child • France reports first case of H5N1 bird flu • US Defence Secretary Rumsfeld says Kofi Annan is wrong in calling for the closure of the military-run detention centre at Guantanamo Bay; **19.** Israel imposes sanctions against Hamas-led Palestinian government • Crown Prince Frederick of Denmark voted the most romantic man in an opinion poll • 15 killed in cartoon protests in Nigeria • Tony Blair calls the US detention camp at Guantanamo Bay an 'anomaly' • Iran sticks to its 'right' to enrich uranium on its own soil; **20.** Osama Bin Laden says in the latest tape that he will never be captured alive • Research shows that one in four British workers has a second job • Sri Lanka moots the idea of a Buddhist pilgrimage trail to attract tourists from China, Japan & Korea • 23 killed in attacks in Iraq • Movement for the Emancipation of the Niger Delta attacks oil facilities in Nigeria • Bird deaths create panic in Britain; H5N1 reaches Germany • Sri Lanka talks begin amid bombing scare; **21.** Iran says it would no longer hold nuclear talks with EU-3, but will hold talks with Russia • Pak President Musharraf says though CBMs are going ahead, not much progress has been made on 'conflict resolution' with India • More violence in Nigeria on cartoon issue, curfew imposed • 22 die in Iraq blast; **22.** 4 out of 10 babies in UK are born to unmarried mothers • 200 m. birds killed or culled in 32 countries, following bird flu threat • OIC denounces the fatwa for killing the Danish cartoonist for drawing caricatures of the Prophet; **23.** Roof collapse kills 45 in Moscow • Sectarian clashes kill 140 people in Iraq • Muslims flee the Nigerian city Onitsha as sectarian violence kills 80 persons • Lindsay Davenport beats Elena Likhovtseva to attain her 700th singles victory at the Dubai Open • Armed robbery at a Bank of England depot in Tonbridge, London - £ 40 m. stolen by a gang posing as police officers; **24.** Suicide bombers try to storm

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the world's biggest oil processing plant in Saudi Arabia • £2 m. reward announced in the hunt for £50 m. British robbery gang • The four Asian cricketing nations - India, Pakistan, Sri Lanka and Bangladesh - to jointly bid for the 2011 World Cup • 54 die in Bangladesh textile mill fire • A coup attempt by a section of the armed forces in Philippines crushed and emergency declared; 25. China rules that all death penalty cases be heard in an open court • NASA's Mars Reconnaissance Orbiter, launched on Aug. 12, 2005, is nearing the Red Planet; 26. Jamaica to have Portia Simpson Miller as Prime Minister, the first woman head of state • H5 subtype bird flu found in a dead duck in Geneva • Prison riot in Afghanistan, with 1500 prisoners (mostly Al Qaeda and Taliban men) in control of a block of the main jail • Drought hits Kenya's wildlife, cattle and citizens • US Ambassador to UN John Bolton criticises UN for bad management and corruption • China warns of bird flu epidemic; 27. According to US Dept. of Commerce's Census Bureau, India with 1.6 b. population will outrank China with 1.4 b. by 2050 • Sri Lankan President Rajapakse's electoral allies JVP and JHU reject the Geneva agreement between Colombo and LTTE • The International Court of Justice opens the

Bosnia genocide case • EU releases 121.5 b. euros in aid to bolster the Palestinian caretaker government • Singer Michael George is held in drug case; 28. 30 killed in three explosions in Baghdad • Bird flu reported in parts of Pakistan's NWFP • IAEA says it hasn't found any evidence that Teheran had diverted material towards making atomic weapons • 2000 Afghan prisoners resume rioting • US provides Pakistan with new missile to hit terrorist hideouts.

March

Mittal the 5th Billionaire

1. H5N1 bird flu infects a German cat • 23 killed in a Baghdad car bomb attack • George Bush says that Bin Laden will be brought to justice • Beijing launches campaign to stamp out public spitting and littering, ahead of 2008 Olympics; 2. Five persons killed and 50 injured in a suspected case of suicide bombing outside the American consulate in Karachi • An Italian investigative commission says USSR was behind the assassination attempt on the Pope in 1981; 3. 19 more killed in Iraq in sectarian clashes • Emergency lifted in Philippines • Vienna talks between EU and Iran end without any agreement; 5. Ramzan Kadyrov appointed Prime Minister of Chechnya • Ninth bird flu death reported

in China • Campaign against Thai Prime Minister Thaksin stepped up • Political parties, media and religious leaders in Pakistan express dissatisfaction over President Bush's visit to the country; 6. Oscar Awards announced: 'Crash' is best film, Philip Seymour Hoffman - best actor, Reese Witherspoon - best actress and Ang Lee - best director • Former rebel Croatian Serb leader Milan Babic commits suicide • Iran says it will not give up the right to small-scale enrichment • IAEA chief hopes agreement will be reached soon to ease Western fears over Iran's nuclear programme • Official enquiry finds no evidence of foul play in the accident that killed Diana • Israel to withdraw from more than a dozen settlements in the West Bank; 7. Bird flu spreads to Russia; 800,000 birds culled; 8. Fiji President Ratu Josefa Iloilo is re-elected • South Dakota state bans abortions • Britain's immigration norms tightened • Security council to take up Iran's nuclear case; 9. UN says bird flu will cross the Atlantic to the Americas within a year • Iran says the move to send the nuclear issue to Supreme Court is part of a psychological war master-minded by USA and aimed at undermining the nation's clerical rulers • Venezuelan national flag undergoes changes - an 8th star and a turnabout of the horse;

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sible death sentence for converting from Islam to Christianity • French students snub Prime Minister's offer for talks • Lakshmi Mittal's 18.6 billion euro takeover bid for Arcelor is blocked by a change in Luxembourg corporate law; 26. Rebels clash with troops in Baluchistan, four killed • Ban on smoking in Scotland; 27. UN prosecutor asks Nigerian President to arrest Charles Taylor, former President of Liberia, to avoid the possibility of his fleeing to evade arrest • Biggest share of votes for pro-Russian Yanukovich, in Ukraine • Tony Blair says Iraq and Afghanistan are 'decisive battlegrounds' for Western values • Four Poles are kidnapped by Nepal Maoists • Suicide bomber blows himself up at an army recruitment centre, killing 40, in northwest Iraq • Asian workers in Dubai are up in arms against poor living conditions; 28. Scientists are hopeful that they may soon have a pill to treat HIV infection • 87% of software sold in Indonesia in 2005 was pirated • Al Qaeda conspirator Zacarias Moussaoui tells jurors that he was supposed to hijack a fifth jet airliner on 11/9/2001 and hit White House • Pope intends to visit China • US senate panel votes to increase H-1B visas to 300,000 a year: more visas for nurses and agricultural workers, illegal aliens in USA are nearer to citizenship; 29. Solar eclipse

observed in Turkey • Kadima Party wins Israeli elections • Former Liberian warlord Charles Taylor flown back to his homeland from Nigeria • Trade unions and students in France shun talks with Prime Minister; 30. Iran refuses to comply with Security Council demand for an end to the uranium enrichment • Hamas cabinet of Palestine led by Prime Minister Ismail Haniyeh sworn in • Gold is \$580 an ounce • Local government elections in Sri Lanka • China overtakes Japan to become the largest holder of foreign exchange reserves in the world, estimated at \$854 billion; 31. China to install a huge 35-tonne stone statue of Mao Zedong in Tibet • Earthquake in western Iran (6.0 magnitude) kills 66 • Supermodel Naomi Campbell arrested for allegedly assaulting her housekeeper • 57 including 18 Indians, die when a boat carrying 137 passengers capsizes near Manama, Bahrain • Iran testfires locally made missile • In Sri Lanka, UPFA sweeps the election to local bodies.

April

Storms Batter USA

1. Mars spacecraft begins orbit • Sayed Sadeq, speaker of a northern Afghan provincial legislature, shot dead by unidentified gunmen; 2. Fernando Alonso wins the Australian Formula One

Grand Prix • First anniversary of the death of Pope John Paul II • Maoists abduct 56 people in Nepal • Saudi Arabia reduces the reservation for nationals from 30 to 10 percent in certain job categories • Election in Thailand • Iran testfires a new high speed underwater missile capable of destroying huge warships and submarines; 3. Australia and China sign a nuclear safeguards deal • Iran says it will test more weapons in the next few days • Maoists announce ceasefire in Nepal • A research team identifies a new source of Nile in Rwanda's southern Myungwe Forest • Storms batter eight US states across the Midwest with tornadoes; 4. Saxony is the worst-affected by floods in Germany • Scientists in Boston rebuild the bladder, a complex human organ, • Wen Jiabao is the first Chinese Prime Minister to visit Fiji • UN says it will take 10 years to get rid of the millions of land mines in 82 countries • British public tells Tony Blair to get out of Iraq • Charges that Saddam Hussein committed genocide against Kurds have been handed to the prosecution • Astronomers say they have spotted a cloud of alcohol in deep space that measures 463 b. km across • French Open winning men and women champions to get equal prize money • Women in Kuwait vote and run for of-

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fice for the first time, in a local by-election; **5.** US Secretary of State asks for Congress support for the nuclear pact with India • Thailand Prime Minister Thaksin Shinawatra resigns; Chidchei Vanasatidya is interim premier • Nepal government arrests about 150 persons and clamps night curfew in the capital in an attempt to thwart the anti-king general strike; **6.** Luxembourg drops a proposed change in its takeover laws that would have helped Arcelor fend off Mittal Steel's \$25 b. takeover bid • Gold zooms to \$600 an ounce • 69 die as boat capsizes off Djibouti; **7.** Dan Brown wins the legal battle over claims that he had copied the idea of 'The Da Vinci Code' from another book • V. Vigne-swaran, a pro-LTTE Tamil activist, shot dead in Colombo • Over 750 held in Nepal on the second day of Opposition strike. **8.** Pakistan to go to the polls in February 2008 • Five inspectors from IAEA arrive in Iran to inspect the uranium enrichment and reprocessing facilities • Bomb kills four in Baghdad • A. Lukashenko of Belarus sworn in President the third time • Protester shot dead in Nepal • 'Casablanca' named No.1 on the list of 101 Greatest Screenplays, by Writers Guild of America; **9.** Brazil's first astronaut Marcus Pontes carried by Soyuz space capsule is back home from ISS; **10.** Explosion

kills 20 in Yuanping, in China • French President drops the controversial labour law • In Peru, no candidate wins 50 per cent of votes; runoff in May • Exit polls predict victory for Romano Prodi in Italian elections; **11.** 45 die in a blast at a park in Karachi • Romano Prodi claims a knife-edge victory in Italy's election • Roche launches its anti-lung cancer drug Tarceva • Iran enriches uranium to the 3.5 percent level needed to fuel nuclear power stations • Japan Princess Aiko starts kindergarten • US says King Gyanendra of Nepal has failed to solve the country's problems • Non-European doctors in UK must have work permit, say new rules • EU increases pressure on Palestinian government to recognise Israel by suspending all direct aid • Israeli Prime Minister Sharon is declared by cabinet as permanently incapacitated • LTTE listed as terrorist group by Canada; **13.** Iran again refuses UN call to suspend uranium enrichment activities in 30 days • LTTE calls for postponement of Geneva talks • IAEA chief El Baradei calls for a political solution to end Iran's nuclear crisis; **14.** Nepal's political parties reject king's renewed pledge to hold elections • China relaxes foreign exchange control • US claims to have broken up the nuclear proliferation network of Pakistan nuclear scientist Qader Khan • Chad to cut off

the flow of oil if World Bank doesn't release funds frozen in a bank account in London • **41.** Taliban men killed in a battle with security forces in southern Afghanistan • Democracy activists seek Nepal King's exit; **17.** Army deployed in Nepal to ensure that food trucks reached Kathmandu on the 12th day of a strike • India-S. Africa trade records a 75 p.c. increase • Oil hits \$70 a barrel on fears of US action against Iran • China's economy records 10.2% growth in Q1; **18.** Crude oil surges to \$ 70.65 a barrel; **19.** Saudi King may mediate between India and Pakistan • South Korea has its first woman Prime Minister in Han Myeong-Sook • Blasts in Lanka claim 10 • Nepal violence claims sixth victim • France says Iran with nuclear weapons is unacceptable; **20.** Thousands take to the streets against the King in Nepal • Chinese President Hu Jintao has discussions with George Bush in Washington; **21.** 40 persons drown in Bangladesh bus crash • Protesters in Nepal want the King to leave the country • Talks between South Korea and Japan on a dispute over the Dokdo islets fail • Indian doctors in UK protest against new immigration rules • Sweden goes green aiming to phase out nuclear power and end dependency on fossil fuels • Milton's *Paradise Lost* to be turned into a movie epic; **22.**

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speech language pathology)

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2 years

(4 semesters)

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Hearing) / BASLP

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(Bachelor in Physiotherapy)

Reco. by I.A.P. & I.A.G.P.

4 years

Pass in 10+2 with not less
than 45% marks in PCB

M.P.T

(Master of Physiotherapy)

Reco. by I.A.P. & I.A.G.P.

2 years

Pass in BPT/B.Sc. PT
with 50% Marks

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(Medical Lab Tech)

3 years

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PCB Subjects

M. S. W.

(Master of Social Work)

2 years

(4 semesters)

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BBM, Law, HRD with 45%
marks aggregate of all subjects.

M.Sc. in

Hospital Management

2 years

Pass in any Degree exam with
not less than 50% marks in
aggregate.

BHS

Hotel Management Degree

2 years

Pass in 10+2
in any combination

General Nursing

Reco. by I.N.C.

3 years

Pass in 10+2, Preferably
with science subjects.

Chinese flee Solomon Islands in the wake of unrest • Nepal's political parties reject the King's offer of transferring executive power to the people; 23. Michael Schumacher wins San Marino Grand Prix • Russia begins deploying advanced air defence systems in Belarus near NATO's eastern border • Sri Lanka calls upon the international community to exert more pressure including sanctions on the LTTE; 24. Former Prime Ministers Benazir Bhutto and Nawaz Sharif plan to build a strategy to restore democracy in Pakistan • 22 dead and 150 hurt in blasts in Egyptian resort Dahab • Hannover Fair, opening today, has 5175 exhibitors from 66 nations, 25. Sarath Fonseka, Commander of the Sri Lankan Army, survives assassination attempt inside the Army Headquarters; eight killed as a woman suicide bomber blows herself up; situation tense in rebel-controlled eastern Trincomalee district • 17 US States now have no-smoking laws; 26. Maoists lift their blockade of Kathmandu and all district headquarters, in response to G.P. Koirala's appeal; 27. Over 100,000 people meet in Kathmandu to hear party leaders on their plans for the country • India rejects Pak proposal to demilitarise J&K by pulling out heavy artillery; 28. A feminist group in France wants to

scrap the title 'Mademoiselle' for young unmarried women • IAEA says Iran is continuing uranium enrichment • A Pak court bans cable operators from showing 'Taj Mahal', being screened in theatres • Parliament of Nepal meets for the first time in four years • Kaavya Viswanathan's novel *How Opal Mehta Got Kissed* being recalled from store shelves, after she admits to copying passages from another book; 29. Pakistan testfires its nuclear-capable missile Shaheen II • Malawi Vice President arrested on treason charges • Russia warns NATO against deploying forces in Eastern Europe and granting membership to Ukraine and Georgia • Hyundai chief Chung Mong-Koo arrested, on charges of embezzlement • Iran President says the country will master nuclear technology at any cost • China ratifies pact on nuclear wastes • Football club Chelsea is crowned champion of England; 30. Swedish King Carl Gusaf's 60th birthday • G.P. Koirala is sworn in Nepal Prime Minister • Coal mine gas explosion in China's Yanan city kills 24 • Outgoing Italian Prime Minister Berlusconi announces his resignation.

May

Gasline Explosion in Nigeria

1. Seven killed in Sri Lanka in two separate attacks • Ra-

cial tensions in Fiji as general elections approach • Protests in USA against changes in the immigration law • Asian bloc (India, Pakistan, Sri Lanka & Bangladesh) to host 2011 Cricket World Cup • 10 million people are affected by drought in China; 2. According to IUCN, the number of threatened animal and plant species has risen to 16,119 • Canada orders a public enquiry into the 1985 bombing of an Air India plane; 3. Kaavya Viswanathan's two-book deal cancelled by publisher Little, Brown & Co., after allegations of literary borrowing proliferated • An Armenian passenger jet crashes into the Black Sea off Russia killing all 113 on board • Van Gogh's "L' Arlesienne, Madame Ginoux" portrait of a French cafe owner sells for \$40 m.; 4. Maoists in Nepal say they are ready to hold peace talks with Government • Arcelor says it would consider Mittal Steel's takeover bid if the order is large enough and made in cash • Fiji's military commander Voreqe Bainimarama advises troops not to vote for the ruling United Fiji Party; 5. Australian swimming star Giaan Rooney, 23, retires to begin a new career as a TV presenter • BRIC countries with \$ 1.3 trillion surpass G7 in forex-gold holdings • Margaret Beckett replaces Jack Straw as British Foreign Secretary • Sudan

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Government and the largest Darfur rebel group Minni Minnawi's agree to sign a peace plan; **7.** Asia Pacific BPO market likely to touch \$14 b. by 2010 • Chinese airlines are expected to double their fleet to over 1500 aircraft by 2010 • Political appointments made by Nepal King Gyanendra invalidated • Berlusconi, Italy's outgoing Prime Minister, alleges persecution by Left-wing adversaries • Sudan may accept UN Darfur force • In case of further pressure, Iran says it might pull out of NPT • In a chopper crash in Basra, five British soldiers are killed • FAO forecasts a fall in world cereal production; **8.** Gold at 25-year high in global market - \$682 • Analysts forecast 2007 oil prices around \$5B a barrel • Iran President writes to President Bush to end the 26-year hiatus between the two; **9.** *Forbes* magazine names Jackie Chan as one of the 10 most generous celebrities • Lakshmi Mittal agrees to revise his offer for Arcelor takeover upwards • 'Save the Children' report says each year 2 m. babies die within 24 hours of birth in the developing world; **10.** Russian President Putin calls for a dramatic building of the country's defence • Georgia Napolitano is the new President of Italy • Russia has 100,000 alcoholics aged 14 or younger • Commission to investigate abuses of power during King

Gyanendra's absolute rule in Nepal • Fighting between militias in Somalia, 122 die; Thousands flee Mogadishu; **12.** Gas pipeline explosion resulting from villagers collecting fuel from the ruptured conduit kill over 200 in Nigeria • Britain replaces US as the publisher of most new books in English • Ethiopian capital Addis Ababa is rocked by explosion; **13.** Russia to make rouble fully convertible by mid-year • Zimbabwe's annual inflation rate soars to above 1000 p.c. • Russian to halt all defence cooperation • Indonesia's Merapi volcano erupts; **14.** Taliban's claim that Indian engineer Suryanarayana was killed at the instance of the ISI refuted by Pakistan • 10 die in Lanka violence • Tony Blair plans to step down next summer; **15.** WHO is alarmed by the statistics that over 3,300 people in the Western Pacific region die daily of road traffic accidents, suicides and drowning • Venezuelan President Chavez in London; **16.** Earthquake of 7.5 over 700 km. north-east of New Zealand under Pacific Ocean • Mark Inglis of New Zealand, a double amputee, conquers the Everest • US to restore full relations with Libya • Jacob Zuma reinstated as deputy president of South Africa's ruling party ANC; **17.** Romano Prodi sworn in Italian Prime Minister • No-trust motion against French Prime Minister

Villepin defeated • China and Arab leaders discuss new partnership projects • Gunman storms Turkey's apex court in Ankara and kills a judge • Paul McCartney and wife Heather Mills to part ways • Gang violence toll in Brazil since May 12 reaches 133; **18.** 59th Cannes Film Festival opens • Nepal's Parliament decides to drastically control the King's political and military powers by stripping him of the title of supreme commander-in-chief of the army, asking him to pay taxes and barring him from convening it; Nepal to be a secular state • Mittal launches its takeover offer for Arcelor • Bill Clinton to write a book on citizen activism and service for publisher A.A. Knopf • Prime Minister Prodi wants Italy's troops out of Iraq • Taliban raid in Afghanistan kills 53 • Fiji Prime Minister Laisenia Qarase sworn in, second time • Pakistan bans Bollywood actor Feroze Khan's entry into Pakistan; **19.** UN tells US to close secret prisons • Fiji's opposition Labour Party accepts PM's offer of seven cabinet posts • EU parliament asks members to freeze the accounts of LTTE • 28 Vietnamese fishermen die in storm • A film on the Beslan crisis of 2004 to be made by merger; **20.** A typhoon that raked the South China Sea kills 104 people • Iraq has a new government, with Prime Minister

Murial-Maliki • EU calls upon world powers to help Iran's nuclear and other industries if Teheran stops enriching uranium; **21.** Euronext and NYSE plan a \$20 bn merger; **22.** 'Col.' Ramanan, senior commander of LTTE, killed • *Da Vinci Code* reports success at box office • 60 Taliban fighters killed in US-led coalition's air strike in Kandahar • WHO Director General Dr. Lee Jong-wook dies after a surgery • Montenegro votes for independence in a referendum; **23.** 17 killed in attacks in Iraq • Moroccan athletics legend Iticham el Guerrouj announces retirement • Consumption taxes in India and China are the highest among Asia-Pacific countries; **24.** Economists say that oil may top \$100 a barrel if a new shortfall were to hit the tight crude supplies • Fiji opposition joins cabinet • 100 feared dead in floods in Thailand • Fire at Istanbul airport; **25.** Former Enron chief executives Kenneth Lay and Jeffrey Skilling found guilty on charges of fraud and conspiracy in the 2001 collapse of the company • Malaysia to issue multiple-entry visas for Indian and Chinese tourists • Clashes between radical Islamic forces and a US-backed warlord alliance kill 38 people in Mogadishu • 3000 people flee their homes in southern Afghanistan following heavy fighting between Taliban and security forces • Five Kuwait women become the first females to register as candidates for parliamentary elections; **26.** Michael Jackson goes to Tokyo to receive MTV Video's Legend Award • H1-B visas doubled from the present 65,000 • Government - Maoists talks begin in Nepal; **27.** Earthquake measuring 6.2 rocks Yogyakarta in Java, killing about 3000, as per first reports • NAM institute for the Empowerment of Women being set up in Malaysia to be operational by Sept. • Russia's steelmaker OAO Severstal merges with Arcelor; Mittal to press ahead

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with his Arcelor bid • Kuwait plans to introduce income tax - a flat rate of 10 p.c. on everybody generating income proposed • VW is recalling 362,000 cars because of a brake light switch problem • Michelin head Edward Michelin, 43, dies in a boating accident • Hundreds of Somalis flee Mogadishu, after a day of fierce battles • Clashes in East Timor nearing a civil war situation • Aung San Suu Kyi's detention extended; 28. Java earthquake toll is around 5000; international aid pours in • Nepal government finalises a 25-point code of conduct with the rebels to take forward their dialogue process • Palestinian President Abbas calls for a referendum on a unity plan to end the power struggle between his Fatah group and the Hamas government • The \$4 b Baku-Tbilisi-Ceyhan oil pipeline to come as stream in a week • Papua-New Guinea and Tonga rocked by earthquake, 29. At Cannes, 'Palme d'Or' prize goes to British director Ken Loach for his film *The Wind That Shakes the Barley* • China to ban smoking at public transport • 33 killed in blasts in Iraq • President Alvaro Uribe of Colombia wins second term • Pope visits Auschwitz • Rioters in Kabul torch cars and buildings, 30. Daewoo Group founder Kim Woo-Choon sentenced to 10 years in prison for fraud

and embezzlement • Vodafone reports the biggest annual net loss in British corporate history owing to write-down of assets bought at the height of the telecom bubble • Pop diva Mariah Carey insures her legs for a billion dollars • Singapore evolves a strategy to record 117 m. visitor arrivals and achieve 30 b. Singapore dollars in tourism by 2015 • Russian rouble to be fully convertible from July 1 • Java earthquake toll is 5,700 • British House of Lords ruling says homemaker and breadwinner are equal partners and so entitled to equal share in family's assets at divorce • US calls more troops for Iraq; 31. Deterioration in the security situation resulting from rivalry between Shia factions in Basra, Iraq's second largest city; Oil exports face a threat, as smuggling causes decline in revenues • USA is ready to join talks with Iran.

June

Mittal-Arcelor Merger

1 Japan's birth rate drops to a record low of 1.25 babies per woman in 2005 • Iran welcomes talks with USA but rejects the condition that Teheran suspend nuclear enrichment • Java earthquake toll is 6200, 2. Maoists stage public rally in Kathmandu • NYSE to buy Euronext for \$9.96 b. in cash and stock • Nissan Motor Co. and Suzuki Motor

Corp. sign agreement to expand their business collaboration, which is a shot in the arm for Maruti Udyog • John Lipsky is IMF's First Deputy MD • Katharine Close, 13, of New Jersey wins National Spelling Bee spelling the word 'Ursprache' - the first female winner; 3. Pak court issues arrest warrants against Benazir and her husband Zardari • U.S. government reaches the cap on the much in demand H1-B visas for 2007 • Thousands in Taiwan demand President Chen's resignation following an insider trading scandal involving his son-in-law; 4. Iraq hints that if USA makes 'wrong move', oil supply may be disrupted • Gunman kills 21 persons including 12 students in sectarian attack • Indonesia's 37th death from bird flu confirmed; 5. In Peru, Alan Garcia wins another term in election • World Newspaper Congress opens in Moscow • Shanghai Cooperation Organization (SCO) is not an 'oriental' NATO, says SCO Secretary Zhang Deguang • President Bush declares his support for a ban on gay marriage; 6. Demolition of the last coffee dam upstream of the Three Gorges Dam is complete • Hundreds protest in Mogadishu against an Islamist militia takeover of the city after weeks of bloody fighting with US-backed secular warlords; 7. 594 prisoners released in Iraq • UAE may d

cide to give a six-year residence visa for unskilled foreign workers; **8.** Al Qaeda's chief in Iraq Abu Musab-al-Zarqawi killed in an airstrike • J.K. Rowling voted the greatest living British writer in a survey, followed by Terry Pratchett, Ian McEwan, Salman Rushdie, Kazuo Ishiguro and Philip Pullman • China bans *Da Vinci Code* • Japanese entrepreneur Daisuke Enomoto to be world's fourth space tourist, who would fly to ISS in September • Colombia-LTTE talks at Oslo remain a non-starter as LTTE 'refuses' to meet the government delegation; **9.** The 2006 World Cup opens in Munich. Germany beats Costa Rica 4-2 • The fist vaccine, Gardasil, to prevent cervical cancer wins US FDA approval • Tony Blair says he is not aiming for UN Secretary General's job • Norway blames LTTE for failure of peace talks • Survey says most Russians want Putin to serve a third term; **11.** Nepal Parliament strips the King of his right to veto laws • Opposition's 'Dhaka siege' demanding electoral reforms leads to police action • Fernando Alonso wins British Grand Prix • Three detainees in the Guantanamo Bay Navy Base commit suicide • Sierra Leone resents US-British plan to move Charles Taylor's war crimes trial from Freetown to the Hague • Israel and Hamas

are on a collision course, as Israeli peace activists demonstrate against the Israeli killing of seven Palestinians picnicking on a Gaza beach; **12.** Israel steps up threats against Palestinian Prime Minister • Pressure mounts on US to close Guantanamo Bay prison • Arcelor rejects Mittal's new offer; **13.** Lord Browne, CEO of BP, says crude oil price may fall to \$40 a barrel • General strike in Bangladesh to press for electoral reforms, violence reported • President Bush makes a surprise visit to Iraq • Al-Qaeda names Abu Hamza Al Mujahir as Zarqawi's successor in Iraq • The only Indian temple in Lahore demolished to pave the way for a multi-storeyed commercial building; **14.** Security measures in Baghdad strengthened with tens of thousands of extra personnel deployed throughout Baghdad • Fresh evacuations from village near volcano Mount Merapi; **15.** India's Shashi Tharoor nominated for the post of S-G, UN • Blast in a bus kills 64 civilians in Sri Lanka • Series of explosions rock the southern provinces of Thailand • Government and Maoists agree on Koirala - Prachanda meet • Major anti-Taliban operation in Afghanistan • Maoist rebel chief Prachanda tells Nepal King to abdicate or face execution • Britain offers to jail former Liberian President Taylor if he is convicted of war

crimes over S. Leone's civil war; **16.** Bill Gates announces his intention to leave his full-time role at Microsoft • Tom Cruise is No.1 on Forbes list of world's 100 most powerful stars • Chinese President says China is committed to forging a long-term strategic co-operative partnership with India • 40 militants killed in anti-Taliban action in Afghanistan • G.P. Koirala government and Maoists agree to share power in an interim Nepal government; **17.** Pakistan to field a candidate for UNSG; **18.** Japan warns North Korea of a 'harsh response' from Tokyo and Washington if it fired a long-range missile • Iran says direct talks with US over Iraq are impossible; **19.** Aung San Suu Kyi, who is under house arrest, turns 61; **20.** Merrill Lynch World Wealth Report says the number of millionaires around the world rose to 8.7 m. over the past year • Most courteous city in Reader's Digest survey is New York, and the rudest is Mumbai • Nicole Kidman to marry country singer Keith Urban • Conservatives are unhappy over the selection of a woman Archbishop for US Episcopal Church • Japan to withdraw all soldiers from Iraq • China wants an Aslan as UNSG; **21.** Saddam Hussein's lawyer Khamis Al Obeidi killed • 150 die in Indonesian floods • Bush is for closing Guantanamo prison; **22.** The pair of



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moons orbiting Pluto are named Nix and Hydra • The dismissal of 600 'rebel' soldiers from the 1400-strong military by East Timor Prime Minister Alkatiri in March now develops into a rift with President Gusmao • Red Cross and Red Crescent movements extend membership to Israeli and Palestinian relief organisations. Red crystal emblem adopted for Israel's MDA; **23.** Chinese military personnel witness a war game solely conducted by US Army, for the first time • **22** die in bombings in Iraq • Seven arrested over an alleged plot to blow up the Sears Tower in Chicago • Agreement signed in Somalia between government and a faction that controls Mogadishu • World's oldest tortoise Harriet dies at 176 years in Australia; **24.** Nearly 150 suspected Taliban fighters have been killed since launching the major operation in southern Afghanistan • WHO finds that the first confirmed case of human-to-human transmission of bird flu issue was that of an Indonesian who died after catching the virus from his 10-year-old son • Vietnam Prime Minister Phan Van Khai to resign • Prachanda of Nepal proposes merger of Maoist army with Nepal army • A memorial for the Kanishka victims to be built in Toronto; **25.** Israeli soldier Gilad Shalit captured by Palestinian militants • Mittal

makes a fresh offer of 40.37 euro per Arcelor share; **26.** J.K. Rowling reveals that Harry Potter might be killed off in the seventh book in the series • Mittal steel and Arcelor to form a steel entity comprising world's two largest steel companies • World's second richest man Warren Buffett to donate 85 p.c. of his \$44 b. fortune (at \$ 1.5 b. a year) to Bill and Melinda Gates Foundation • East Timor Prime Minister Alkatiri quits; **27.** Ronaldo scores his record 15th World Cup goal • Blasts in markets in two Iraqi cities kill 40 • Nguyen Tan Dung is elected Vietnam Prime Minister • China bans use of tiger parts in traditional medicine • 111 rebels killed by government forces in Ethiopia • Israel masses force near Gaza • Ousted Prime Minister Alkatiri's supporters torch buildings in East Timor; **28.** France displaces US as the world's top investor abroad in 2005, says OECD • Pakistan may field Maleeha Lodhi for UNSG's post • Michael Jackson is moving to Europe to resume his music career • Jackie Chan to give half his fortune to charity • Montenegro becomes the 192nd member of United Nations; **29.** The micro car 'Smart' made in France, has two seats and gives 17 km per litre, is displayed in Detroit • Sri Lanka to make knowledge of Sinhala and Tamil compulsory for recruits to public service at

all levels • Parliamentary election in Kuwait, women vote for the first time • GM to launch a mini car in India next year • Floods in north-east US kill 11 • Arrest of several senior Hamas leaders; Israeli jets fly over President Assad's summer palace • Russian steelmaker Severstal's may drop Arcelor bid for \$176 m; **30.** The merger of Mittal Steel with Arcelor is now certain, as majority of Arcelor shareholders decide to say 'no' to Severstal offer • Pakistan not to accord MFN status to India as well as tariff concessions due under SAFTA which becomes operational on July 1 • Dutch Prime Minister J.P. Balkenende resigns • Israel attacks Gaza with 30 air raids • Russia says Ukraine sold banned long-range missiles to China and Iran.

July

World's Highest Railway

1. Qinghai-Tibet railway, the world's highest and longest highland railway, becomes operational • England crashes out of the World Cup; Argentina loses to Germany • The first-ever Beijing Lhasa Express leaves Beijing at 9.30 p.m. to reach Lhasa at 9 p.m. on July 3 • WTO talks fail • Brazil develops a new biofuel through a vegetable oil blend • 66 killed in a car bomb blast in Iraq • ULFA says it is ready for direct talks with the centre • A

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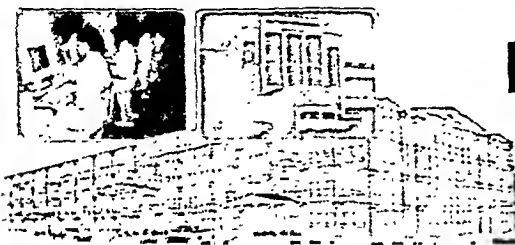
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straight-set defeat to Rafael Nadal marks the end of Andre Agassi's career • African Union Summit in Banjul, Gambia • Jose Ramosttota, Nobel Peace Prize Winner, being considered for Prime Minister of East Timor; **2.** Gold may top \$700 an ounce again this year, says GFMS • Office of Palestinian Prime Minister Haniyeh blasted • Saddam Hussain's wife and daughter, both living in exile, are on a new list of most wanted figures in Baghdad • Earthquake of 5.3 magnitude hits eastern Indonesia; **3.** Seven killed in Sri Lankan violence • Prachanda calls his cadres to suspend the actions of the 'people's court' in Nepal • Rival candidates claim victory in Mexican presidential election; **4.** Finland broadcasts news in Latin • Pakistan to get 36 F-16s from US • First World Summit of Religious Leaders in Moscow is attended by 200 representatives from 40 countries • Number of internally displaced people due to conflict in Sri Lanka rises to 3 lakhs; EU announces Euros 7 m. in aid; **5.** North Korea testfires a series of missiles including the international Taepodong -2; UN holds emergency meet on North Korean missiles • 'Discovery' launched • Prince Tui Pele Haka of Tonga and his wife die in car crash near San Francisco; **6.** PM Bucko-vski concedes defeat to Opposition in Macedonian parlia-

mentary elections • **13** Palestinian civilians killed as Israel invades Gaza • Spaceshuttle 'Discovery' closes -in on ISS; **7.** Crude oil price tops \$75 a barrel • Lukas Podolski named World Cup's crown prince • Percy Sonn is new ICC President • Toll in explosives blast in China is 47 • Rift between Sri Lankan President and opposition UNP widens; **8.** Amelie Mauresmo is the first French woman in 81 years to win the Wimbledon singles title. She beats Belgium's Justine Henin-Hardenne; **9.** Russian passenger jet bursts into flames while launching at Irkutsk, Siberia, killing more than 122 people • Major General Nanda Mallawarachchi is Sri Lanka's acting Army chief; **10.** Italy beats France 5-3 to win World Cup football • Roger Federer is Wimbledon men's champion - the fourth successive win • Ramos Horta sworn in East Timor prime minister • **24** killed in Iraq attacks • China, Pakistan to renovate Karakoram Highway • Pak plane crashes into the field in Multan killing 45 • Colombian driver Montrya to leave Formula One • **27** killed in fighting in Somalia • Chechen rebel leader Shamil Basayev reportedly killed. Basayev is the most wanted man in Russia responsible for Beslan school hostage massacre • A report says violent racism is on the rise in Russia; **11.** Tobacco will kill 1 b. people

this century, say public health officials • Marco Materazzi of Italy, admits he insulted Zinedine Zidane before Zidane head-butted him in the World Cup final • Sunnis end their boycott of Iraq's parliament • Train accident kills 33 in northern Bangladesh; **12.** China's Liu Xiang gets a new world record in 110 m. hurdle at 12.88 sec. • Segolene Royal and Nicolas Sarkozy reported to be world-be presidential candidates in France • ADB disburses over \$11 m. for fighting bird flu • Israel launches raids on Lebanon • Muslim Conference wins half the seats in PoK Assembly election • Ashwell Prince becomes the first non-white player to lead S. Africa in tests; **13.** Toyota recalls 367,500 US Highlander and Lexus RX spark utility vehicle to fix faulty clips that may cause a console panel to fall on to the accelerator; **14.** Banks of Japan hikes interest rates-key rate is now 0.25 p.c. against zero • **16** killed in renewed violence in Sri Lanka • Oil prices cross \$7B a barrel • Pakistan says Indian Prime Minister's comment that Mumbai bombers had received help from 'across the border' was baseless; **15.** Israeli warplanes pound Hezbollah's South Beirut stronghold • Gunmen kidnap Iraq's Olympic chief • Russia and US to expand nuclear ties with India; **16.** Gabriela



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Sabatini, Patrick Rafter and Gianni Clerici in the Hall of Fame on Newport's grass courts • Tropical storm kills 48 in China • Pakistan says Benazir and Nawaz Shariff can't contest polls • Putin wants India and China in G-8 • Ferrari's Michael Schumacher makes Formula One history in France as the first driver to win the same Grand Prix eight times; **17.** G8 leaders meeting at St. Petersburg express solidarity with India where terrorist action crippled Mumbai on July 11 and express determination to continue fight against terrorism • US space shuttle *Discovery* is back after 13-day mission, landing in Florida • Prime Minister Manmohan Singh holds talks with President Bush at St. Petersburg - India is convinced that US has no intention to go beyond the scope of the Indo-US nuclear deal • Over 170 killed in floods in South China; **18.** Java tsunami death toll mounts to 340; 200 are missing; over 54,000 are displaced • Mittal Steel acquires 50 p.c. of Arcelor shares • China's economy grew by 10.9 p.c. in the first half of 2006 • UK bans Islamist militant group Al-Ghurabaa and the Saved Sect • Death toll from rainstorms and floods in China rises to 198 • Following fierce fighting between Israel and Lebanese militant group Hizbollah, internally displaced Lebanese

seek refuge in mountain villages, and foreigners await evacuation • Blast kills 53 in Iraq • A Pakistan court issues arrest warrants for Benazir Bhutto and her husband for allegedly submitting false asset statements to the election commission; **19.** Britain to allow gambling ads on TV • Evacuation of foreigners in progress in Beirut • Serena Williams, back after a six-month lay-off, scores a victory • 6.2 magnitude quake strikes Indonesia, coasts of west Java and South Sumatra alerted • Israeli bomb blitz kills 54 in Lebanon • Nepal to hold constituent assembly election by mid-April; **20.** French footballer Zinedine banned for three matches for head-butting Italy's Marco Materazzi, who gets a two-match ban • Bill Gates to give \$287m. to help 165 scientists in 19 countries who work on an AIDS vaccine • Third day of fighting between Israeli troops and Hizbollah fighters of Lebanon • 42 die of bird flu in Indonesia; **21.** Israel mobilises reservists to reinforce units fighting Hezbollah gunmen in Lebanon • Crude oil is above \$74 • 30 persons in Europe die in heat wave • Khmer Rouge leader Ta Mok dies • Hizbollah chief rules out unilateral release of kidnapped soldiers • China's death toll from tropical storm Bilis more than doubles to 482; **22.** US to speed up delivery of precision

-guided bombs to Israel • A private firm in Virginia offers a trip to space for \$ 35m. • A new James Bond novel to be published in May 08, to mark the centenary of Ian Fleming's birth • Ethiopian military personnel land at a Somali airbase • Earthquake in China's Yunnan province kills 8; **23.** Saddam Hussein hospitalised after 16 days of hunger strike • American Floyd Landis is Tour de France champion • UN says the devastation by Israel air strikes in Lebanon is horrific • Earthquake (6.1) hits Indonesia's Sulanesi Island • 4 killed in Iraqi blasts • Cuba's President Castro and Venezuela's Hugo Chavez tour the Argentina boyhood home of legendary guerilla Che Guevara; **24.** Miss Puerto Rico Zuleyka Rivera Mendoza is named Miss Universe in Los Angeles • India blames the developed countries for the failure of the WTO talks • Australian government issues a rallying cry for its citizens to have more babies • Tiger Woods wins British Open Golf Championship • Nepal abolishes Military Secretariat • Bird flu reported in Thailand • Heat wave kills 10 in California; **25.** Washington Post reports that Pakistan is building a powerful new reactor for producing plutonium • Scientists find evidence of giant hydrocarbon lakes on Saturn moon Titan • India's Shashi Tharoor and South Korea's Ban Ki Moon

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emerge key contenders for UNSG in the first informal poll held by SC; 26. In California, triple digit temperatures continue for the ninth day •Typhoon Kaemi batters east China's Fujian province, claims nine lives •Mittal Steel acquires 92 p.c. of Arcelor shares •Saddam Hussein says he was brought to court against his will •An Israeli air strike kills four UN observers in South Lebanon •UNSC condemns Israeli attack on a UN observer post in Lebanon which killed four peacekeepers •EAS countries express concern at the collapse of the Doha round of global trade talks •Number of Iraqis killed in war-related violence since the new government took over is put at 10,867 •US to send more troops to Iraq •Nine Israeli soldiers killed in fighting with Hizbollah; 27. US House of Representatives votes for legislature providing greater access of sensitive nuclear technology to India •27 killed in Baghdad blast •Russia to sell Venezuela weapons worth \$3 b. •Nine killed in a new wave of Israeli attacks •Prime Minister Manmohan Singh calls for immediate halt to violence in Lebanon •EU Trade Commission Peter Mandelson blames the US for the WTO fiasco; 28. Finland to pull out of the Sri Lanka Monitoring Mission on grounds of security •People fearing Israeli campaign on

border villages rush towards Christian dominated villages •A British scientist's study gives top place to Denmark, as the happiest country in the world, and Burundi the most unhappy, US is at 23, UK 41 and France 62; 29. Muslims in Malaysia banned from using Botox injections for cosmetic purposes •Maoists in Nepal extend ceasefire by three months •Beirut university turns into a refugee camp •Paul McCartney files for divorce from Heather Mills; 30. Sri Lankan troops capture a key reservoir in the north-east and kill 40 Tamil Tigers •20 Taliban fighters killed in Kabul •51 Lebanese killed, many of them children, in Israeli warplane outrage •Fire in Bahrain building kills 16 Indians from Tamil Nadu; 31. Israel suspends air strikes on Lebanon for 48 hours •UNSC orders Iran to halt its nuclear programme by Aug.31 •Australian Prime Minister John Howard to seek a 5th successive term in 2007 election.

August

Fidel Castro steps down temporarily

1. Cuban President Fidel Castro steps down temporarily after intestinal surgery, handing over power to his brother Raul Castro •Nepal cabinet approves a legislature aimed at ending gender bias in monarchy •Govt. orders a

ban on employment of children as domestic helps or as servants at hotels, etc.; effective from Oct. 10 •US says satellite pictures 'show' Pakistan has terrorist training camps in its territory •Israel bombs Lebanon, aiming to create a 30-km buffer zone •24 Sri Lankan soldiers killed by LTTE •Bombings and shooting kill 55 in Iraq; 2. Hezbollah rockets pound Israel, and Israel steps up ground strikes by sending commanders •Writers John Irving and Stephen King urge J K Rowling not to kill Harry Potter in the 7th book •President Musharraf says without army, Pakistan will be like Lebanon •War for a water reservoir leads to Sri Lankan offensive killing 68 •10,000 North Koreans believed dead or missing in the country's worst flood in the century; 3. Fighting kills 18 civilians in Muttur, Sri Lanka •132 Hezbollah rockets pound northern Israel, killing five •UN team in Nepal to study its role in resolving conflict •Iranian President calls for elimination of Israel •21 killed in Afghan car bomb attack •New Israeli air strikes on Beirut take toll to 900 •Typhoon Prapiroon nears southern China, thousands evacuated. 4. 40,000 persons are trapped in the Muttur town in Sri Lanka, humanitarian crisis •Israeli air strikes mount in Lebanon •25 Taliban men

killed in Afghanistan • Sania Mirza suffers her third successive defeat against Russian World No. 6 Elena Dementieva; 5. Following Pakistan's expulsion of Indian Visa Counsellor Deepak Kaul, India expels a Pakistan diplomat • In its reaction to UNSC deadline for Iran to suspend all fuel enrichment activities, Iran says it is ready for talks but won't change its policies under pressure; 6. Lebanon rejects the draft UN resolution calling for an end to the conflict • Egyptian Museum displays the mummy of Pharaoh Rames IV • Israel arrests Aziz Dweik, the Hamas Speaker of Palestinian Parliament • Afghan troops and police kill 17 Taliban men;

7. Nepal Maoists say peace talks are on the verge of collapse on arms issue • Tiger Woods is the youngest player in PGA history to win 50 titles • US says anti-Indian terror groups exist in Pakistan; 8. US lifestyle guru Martha Stewart agrees to pay SEC \$195,000 to settle civil charges of insider-trading • Arab nations urge withdrawal of Israeli forces from Southern Lebanon; Israel is studying Lebanon's offer to deploy 15,000 Lebanese troops along the border • 29 Thai provinces are hit by bird flu • UK thinking of ethnic quotas for jobs; 9. Iran President says pressure on his country can make it reconsider its adherence to the

NPT • Nepal govt. and Maoist rebels reach agreement on UN monitoring of their ceasefire and the management of the arms held • Indonesian bird flu toll is 45; 10. Highest security alert in Britain after police foil a plot to blow up aircraft in mid-flight between Britain and USA; Flights cancelled; Heathrow closed; thousands stranded; 11. Blogs reach 50 m. - a 100-fold increase in three years • UK freezes assets of 19 terror suspects • 29 killed in fighting between Sri Lankan army and LTTE • Air raids continue in Lebanon • Thaksin Shinawatra to contest Thai election in October; 12. Lebanese ceasefire resolution unani-

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nously adopted by UNSC •David Beckham not to be British captain •German novelist Gunter Grass admits serving in the Nazi SS during WWII •128 killed in Sri Lanka fighting; **13.** Earthquake (5.5) jolts Indonesia's Aceh •Fidel Castro of Cuba is 80 •Israel agrees to a ceasefire after its fighters fail to overrun Hizbollah in S. Lebanon •LTTE alleges that Rajapakse regime is for a military solution in Sri Lanka •Son of an Indian immigrant in London is among the 24 people arrested for the plot to blow up US aircraft •6-day global AIDS conference opens in Toronto; **14.** Global Wheat output for 06-07 put at 598 m. tonnes •Oil falls to \$73 a barrel, on West Asia truce •61 schoolchildren and 6 other persons killed in explosions in Colombo; the target was a Pak High Commission convoy •Roger Federer wins his second Rogers Cup in three years, in Toronto Masters •Nepal has a new Army Chief - Lt. Gen.. Rukmangat Katuwal •China typhoon Saomai toll is 255; **15.** Australia shelves its Immigration Bill •Syria says US and Israel have lost their grip on West Asia •Dell to recall 4.1 m. notebook computer batteries made by Sony because they would overheat and catch fire •Japanese Prime Minister Koizumi's visit to Yasukuni war shrine triggers furore •Oliver Stone's film

'World Trade Centre' makes a debut at US box office over the weekend earning \$18.7 m.; **16.** Tri-nation cricket series put off; **17.** Floods kill 900 in Ethiopia; Ormo river bursts its banks; more dams may burst •17 Lebanese army troops move into the south to help enforce the ceasefire •In renewed battle, 100 Tigers killed •NASA says original tapes of man's first landing on the moon in 1969 have been lost •World steel production in 2006 is 1.2 b. tonnes; **18.** Chechen rebel Umarov's brother surrenders •Namira Salim, a Pakistani artiste based in France, chosen by US firm Virgin Galactic for its commercial space flight in 2008 - the first Pakistani astronaut •SAF Games begin in Colombo; **19.** Israeli commandos launch raid deep inside Lebanon •President Rajapakse says his government is committed to peace and negotiated settlement in Sri Lanka •Marion Jones reportedly has failed in a doping test •Asfa Powell equals his own 100 m. world record (9.77 sec.) for the third time; **20.** Earthquake (7.2) shakes the South Pole •Sri Lankan army claims that 100 cadres of LTTE have been killed in latest Jaffna battle •Lebanon warns militant group against violating the ceasefire; **21.** Train crash kills 58 in Egypt •Tiger Woods clinches his 12th major title and third PGA crown; **22.**

Russian jet with 170 on board crashes in eastern Ukraine •Marion Jones 'shocked' by report about her positive drug test •Serbian teenager Ana Ivanovic beats Martina Hingis to win the \$1.34 m. Rogers Cup title; **23.** The board game Scrabble to use titles in pink to raise money for research into breast cancer •A Mumbai-based US airline flight returns to Amsterdam after alarm •Former Pak all-rounder Wasim Raja dies while playing; in London; **24.** International Astronomical Union meeting in Prague decides to relegate Pluto to the status of a 'dwarf planet' •"Pluto is a Planet" T-shirts being sold online •A study says as a result of global warming, spring now arrives 6 to 8 days earlier across Europe than in the early 1970s; **26.** Arousheh Ansari, Iranian-born US woman, to become the world's first female space tourist •Heavy water plant, with capacity to produce 16 tonnes a year, opened in Iran •Brazilian Felipe Massa beats Michael Schumacher in Istanbul •Umpire Darrell Hair in the news after his ball-tampering allegations against the Pak team playing in England; **29.** Rioting in southern Pakistan over killing of Bugti; **30.** 'World Trade Centre' film to donate \$2.6m. to 9/11 charities •40 killed in Iraq blasts •Pak authorities say the Baloch leader Bugti was killed in a cave col-

lapse • Israel rejects a call from Kofi Annan to lift its air and sea blockade of Lebanon; 31. Warren Buffett, 76, marries longtime companion Astrid Menks, 60 • Angry mobs protesting Bugti killing block rail line in Pakistan.

September

Pope Apologizes

1. Lockheed to build next spaceship for NASA • US says military action against Iran is possible • Maoists breach ceasefire code of conduct in Nepal • Shinzo Abe is a candidate for Japan Prime Minister • 80 killed as Iranian airliner catches fire at Mashhad • Germany's Angela Merkel is world's most powerful

woman, according to a *Forbes* magazine list. Condoleezza Rice is second, Wu Yi third, Indian-born Indra Nooyi fourth and Sonia Gandhi 13th • Slain Baloch leader Bugti buried under government supervision in Pakistan • Rebel astronomers to fight for Pluto's status; 2. 80 LTTE cadres killed in a naval battle; 3. Enforcement Directorate serves notice on Natwar Singh and son in the Iraqi oil-for-food scam • Miss Afghanistan Vida Samadzai, expelled from her country three years ago, denied permission to participate in Fashion Week parade in New Delhi • Sri Lanka freezes NGO funds • Opium poppy cultivation in Afghanistan hits

record levels; the country produces 90% of world's opium and heroin supply; 4. Sir Lankan army captures Sampur in Trincomalee district • Sudan asks all peacekeepers to leave • Europe's SMART-1 spacecraft slams into the moon, ending its three-year mission • Australian crocodile hunter Steve Irwin is killed in a 'freak' stingray attack; 5. Pakistan signs a deal with local Taliban militants in N. Waziristan • 60 Taliban militants killed in S. Kandahar, Afghanistan • Iraq to have a new flag in place of 'the Saddamist flag' • Human rights group wants investigation into Israeli use of cluster bombs in the fighting in Lebanon • Serge Girard completes

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a 260-day run between Paris and Tokyo (19,097 km) without a full day of rest - a record; **6.** Seven junior members of UK's Blair government quit • Pakistan withdraws an offer of safe haven to Bin Laden, after US outrage • Maoist controlled unions rally for worker's rights in Nepal • Japan's Princess Kiko gives birth to a baby boy, the first imperial male heir to be born in more than four decades • Iran to cleanse school and universities of liberal and secular influences; **7.** A bronze bust of Kalidasa unveiled in Shanghai • Marian Jones cleared of doping charges • President Bush confirms existence of a secret CIA prison network • British Prime Minister Tony Blair is to quit within a year • Israel lifts its air and naval blockade on Lebanon; **8.** New video released by Al Jazeera shows Osama preparing for 9/11, 2001 strikes; **9.** Leander Paes and Czech partners Martin Damm enter US Open Men's Doubles final • Campaign to oust Taiwan's President Chen • Space shuttle Atlantis with 6 astronauts blasts off • Pope visits Germany • UNGA adopts a global strategy to counter terrorism • Former Iranian President M. Khatami says atomic weapons of India, Pakistan and Israel must be eliminated first; **10.** Maria Sharapova wins US Open • 11S LTTE men killed in Sri Lanka • Martina Navratilova

is retiring; **11.** Atlantis docks with ISS • A law student of 19, Lucy Tate, becomes Britain's youngest magistrate • Fifth anniversary of 9/11 • Russia tests missile from under ice-bound sea • Hamas and Fatah agree on the formation of a national unity government • Bangladesh Prime Minister Khaleda Zia suspects sabotage at polls • Fierce battles continue in Jaffna • Roger Federer is US Open Champion - third Grand Slam title of the year and the ninth of his career; **12.** Warring parties in Sri Lanka agree to unconditional peace talks • A terror attack on US embassy in Damascus foiled • Over 50 killed in a stampede at a stadium in Yemen; **13.** President Musharraf says Indo-Pak relations have never been so good • According to UN, US has the largest inflow of migrants, Afghanistan is second. India is fourth on migrant outflow list • First bird flu case reported in Sudan • A blast kills 10 in Turkey • Sri Lanka ready for talks if violence stops; **14.** Hollywood superstar Nicole Kidman is Australia's richest woman under 40, with a \$150 m. fortune • Bird flu toll is 49 in Indonesia • The first ordination of rabbis in Germany since WWII held • Iran is optimistic about its talks with EU, but not so with US • Seven killed in Sri Lanka violence • Russia's top banker Andrei Kozlov shot dead • A report

says France is a declared direct target of Al Qaeda; **15.** The new Japanese prince is named Hisahito • Iraq to ring Baghdad with trenches to protect the city • Muslims across the world protest against Pope Benedict's reference to Islam in relation to violence during his visit to Bavaria; Vatican says Pope meant no offence; **16.** Pope apologises to Muslims for his speech on Islam • Security forces gun down four LeT militants in J&K • US says it can go to Pakistan looking for Osama only if invited by Pakistan; **17.** Global Day for Darfur (Sudan) sees protesters around the world calling for an end to the fighting; **18.** 11 Muslims hacked to death in a jungle in eastern Sri Lanka • World's first woman space tourist blasts off on a Soyuz rocket from Baikonur • Attempt on Somali interim President A.Y. Ahmed's life; **19.** Thai military stages a bloodless coup against Prime Minister Shinawatra • Moldova's breakaway province of Trans-Dniester votes to become part of Russia; **20.** A new ring is spotted on Saturn, NASA says • Gold price falls to \$572.30 an ounce • Coup leader Gen. Sonthi Boonyaratglin says civilian rule will be established in Thailand in a fortnight • Hewlett Packard marks 100 millionth printer sale • Shinzo Abe to be next Japanese Prime Minister; **21.** Muhammad

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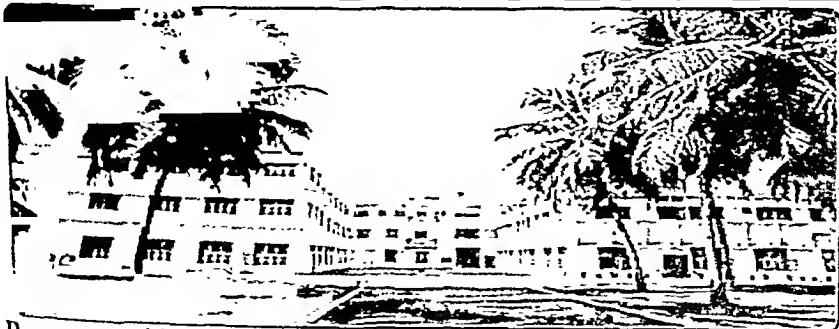
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Ali's daughter Laila Ali to make her debut at Madison Square Garden in November • China's telephone users now exceed 804 m., of which 437 are mobile phone subscribers • California sues six world automakers over global warming • Musharraf says Pakistan has 'certain apprehensions' over New Delhi sharing information on Baluchistan • Atlantis, the US space shuttle, lands in Florida safely • Thailand's coup leaders ban political activities • 100 people may have died in Bangladesh storm • Deposed Thai Prime Minister Thaksin asks for early elections; 22. Bush wants Kashmir issue resolved bilaterally • A trans rapid high speed train crashes into a service vehicle in Germany • China's population of the elderly to become 174 m. by 2010; 23. A French secret service report says Osama bin Laden has died of typhoid; 24. Asian stocks fall for the third week • Saudi Arabia has no evidence that bin Laden has died • Martina Hingis wins Sunfeast Open, in Kolkata • 20 killed in violence in Iraq; 25. Crude fortunes in New York fall below \$60 a barrel, on reports that Iran favoured talks on its nuclear programme • Sri Lankan navy claims to have sunk 11 LTTE boats, killing 70 separatists • Afghan President says Osama may be hiding in Pa-

kistan • Saddam Hussein sent out of court • Chopper missing in Nepal for three days found, all 24 on board dead • Pope wants inter-faith dialogue for peace; 26. Taliban source says bin Laden is alive and well; 27. US falls to 6th place in World Economic Forum's 2006 global competitive rankings • Guatemalan security forces take over a prison, controlled for more than 10 years by inmates who produced drugs and lived in spacious homes; 28. Gold trades above \$600 an ounce • Dow Jones index rises to 11,724.86, surpassing a record close of 11,722.98 on 11/1/2000 • Inzamam-ul-Haq cleared of ball tampering charges, but there is a four-match ODI ban for leading a protest against the umpires • Pakistan says Osama could be in Afghanistan • China conducts fusion reactor test successfully • 28 killed in Iraq blasts • Typhoon Xangsane wreaks havoc in Philippines; 29. South Korea's candidate Ban Ki-moon leads straw poll for UN SG's post • Anousheh Ansari, the space tourist, returns; 30. Brazilian plane Boeing 737 with 155 crashes after colliding with a smaller aircraft, over Amazon jungle • French socialist Segolene Royal enters race to be President • Talks by visiting President Musharraf and Tony Blair in London on Indo-Pak ties and terrorism.

October

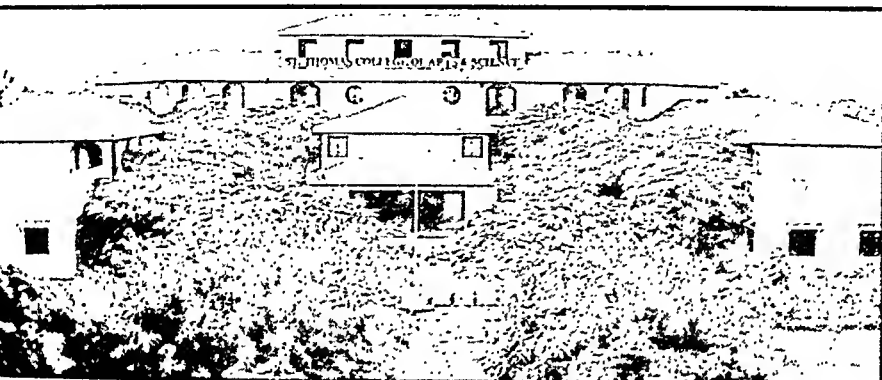
Nobel to Younus of Bangladesh

1. Michael Schumacher wins Chinese GP to tie with Alonso in F1 championship • Tatiana Kucharova, 18, of Czech Republic is Miss World; 2. Suraynd Chulanont is the new Thai Prime Minister • Sporadic gun battles in Palestinian areas • Russia imposes a total economic blockade on Georgia • Shootout in a Pennsylvania school kills five children; 3. LTTE agrees to hold unconditional talks with Sri Lankan Government • A Turkish plane with 107 passengers from Tirana is hijacked to Italy's Brindisi airport • US population reaches 300 m • North Korea to conduct a nuclear weapon test • Fighting erupts in Darfur, Sudan, killing 40. Aid workers flee Greida; 4. Nicaragua plans a \$20 b. rival to Panama Canal • 58th Frankfurt Book Fair opens with 7272 exhibitors from over 100 countries; 5. Colombo - LTTE talks to be held on Oct. 28 and 29 in Switzerland • NATO assumes control of international forces across Afghanistan • Thai martial law to continue • Fredrik Reinfeldt is approved as Sweden's new Prime Minister; 6. Main Sri Lankan parties agree to reach consensus on ethnic issue • Russia departs 150 Georgians; 9. North Korea says it has successfully con-



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ucted an underwater nuclear test 'under secure conditions'. Bush calls it a threat • UNSC recommends South Korea's ban Ki Moon to General Assembly as S-G; **11.** Kiran Desai wins the Booker Prize • Intense fighting results in the death of 22 Sri Lankan soldiers • North Korea warns of more nuclear tests if US keeps pressuring it; South Korea asks UN to send a 'clear and firm' message to North Korea; **12.** Turkey's

Orhan Pamuk wins Nobel for Literature; **13.** Nobel Prize for Peace won by Bangladesh's Grameen Bank and its founder Muhammad Yunus • Cambridge Varsity shuts door on Sanskrit as a subject of undergraduate study; **14.** First International Rome Film Festival begins; **16.** Shoaib Akhtar and Mohammad Asif fail a drug test; **19.** Heather Mills says Paul McCartney tried to kill her • Muhammad Yunus may

launch a political party • 90% of globe to be mobile by end of the decade • Dow Jones sails past 12,000 mark; **20.** Opec to cut oil output by 1.2 m. barrels a day from Nov. 1; **21.** 'Hong Kong Protocol', a new liver transplant protocol can halve Hepatitis B surgery costs • 35 Tiger rebels killed in Sri Lanka sea battle. **22.** Britain to reduce House of Lords in size by more than a third.

Calendar of Events, India

November, 2005

New CM for J&K

1. Y.K. Sabharwal is sworn in new Chief Justice of India • Former President K.R. Narayanan in hospital • Delhi reacts to President Musharraf's suggestion on demilitarising both sides of Kashmir saying that it could not be done unilaterally; **2.** Ghulam Nabi Azad sworn in J&K Chief Minister; **3.** India wins Videocon Cup beating Sri Lanka in ODI series in Pune. • Congress to send a legal notice to the parties concerned on the Volcker Committee report; Govt. is concerned about the unverified references; **4.** Rupee touches year's low against US dollar at 45.52 • HRD Ministry asks all Ministers and Departments of Central and State Governments to in-

clude the mother's name in all certificates and documents; **5.** Union Minister of State for Water Resources J.N. Yadav (of RJD) resigns, after warrants were issued against him for 'forcibly' securing the release of his brother from police custody; **6.** Sam Manekshaw, 96, moved from Wellington to New Delhi for treatment • Stampede at a relief distribution centre in Chennai kills six; **7.** Number of cotton growers committing suicide in Vidarbha crosses 100 • Foreign minister Natwar Singh demoted to Minister without portfolio • Kerala ranks first in gender report by National Productivity Council, followed by Tamil Nadu, Punjab and Gujarat • Czech President V. Klaus in New Delhi; **8.** Sensex climbs to 8317 • Prime Minister says there is no

evidence against Natwar Singh or Congress in the Volcker case • BSNL's profit crosses Rs.10,000 cr. in 2004-05 • Kerala High Court rules that nuns and priests can enrol as advocates; **9.** Former President K.R. Narayanan, 85, dies in Army hospital, Delhi; **10.** Government announces a reduction in entry fee for NLD and ILD telephone players to a uniform Rs. 2.5 cr. from Rs. 100 cr. and 25 cr. respectively • Supreme Court quashes an order passed by UP's Mulayam Singh government withdrawing POTA charges against State Minister R.P. Singh alias Raja Bhaiya • **11th** Kolkata Film Festival begins • Former President K.R. Narayanan cremated in New Delhi with full state honours in the presence of President Kalam and Prime



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Minister Manmohan Singh • Federal Bank and Lord Krishna Bank call off the merger of the two banks; **11.** Prime Minister Manmohan Singh in Dhaka for the 13th SAARC summit • CBI brings back Abu Salem, a most wanted terrorist and the prime accused in the 1993 Mumbai serial blasts and his girl friend Monica Bedi, after a three-year legal process in Portugal; **12.** Prime Minister Manmohan Singh offers open sky policy for SAARC, at the Dhaka summit • Oct. 29 Delhi serial blasts suspect Tariq detained • Kerala gets 539 of the 1047 scholarships for the single girl child announced by HRD Ministry • Naxal attack in Jehanabad jail, Bihar kills six persons; **13.** Abu Salem 'confesses' role in '93 serial bomb blasts in Mumbai, says a CBI official; **14.** Keralites pay homage to former President K.R. Narayanan as the urn containing his ashes is brought to the State • Naxals kill eight Ranvir Sena men kidnapped during the attack on Jehanabad jail • Former UP minister Raja Bhैया surrenders • Mizoram bans import of birds and pigs from neighbouring Myanmar and Bangladesh; **15.** The dedicated Lok Sabha satellite channel to telecast 24 hours a day • Left parties warn Government of serious consequences if it votes in favour of referring the Iran nuclear issue to UNSC • Two die and 60 are injured as militants carry out a grenade attack on former minister

Ghulam Hassan Mir's rally in Tangmarg • Stamp scam accused Telgi's wife Shahida surrenders; **16.** Finance Minister says disinvestment in a few non-Navratna PSUs is contemplated • Srinagar car bomb blasts kills four and injure 45 • Fifth crossing point for aid supplies opens in Uri; **17.** FDI upto 20% permitted for FM radio; **18.** In a limited cabinet reshuffle, Manmohan Singh retains the External Affairs Ministry. Information & Broadcasting Ministry goes to Priyaranjan Dasmunshi, Urban Development to Jaipal Reddy and Sports & Affairs of Overseas Indians to Oscar Fernandes • Kerala High Court rules that misuse of public interest litigation for publicity should be dealt with an iron hand • 68 p.c. voter turnout in Thiruvananthapuram Lok Sabha byelection; **19.** As Monica Bedi tells the court that she was not married to Abu Salem, India presses for the extradition of his ex-wife Samaira Jumanji from the US; **20.** About 155,000 candidates take the Common Admission Test (CAT) for entry into IIMs and 75 other management schools in the country; **21.** Kingfisher Air orders 30 Airbus A320s • 85 Indian companies now have market capitalisation above \$ 1 billion • Gold sets new record at Rs.7415 / 10 gm • B. Maniappan, a member of the Border Roads Organisation, is kidnapped by the Taliban in

Afghanistan; **22.** NDA under JD (U) leader Nitish Kumar wins a resounding victory in Bihar Assembly election • In Mumbai North-West, Sunil Dutt's daughter Priya Dutt beats Sena candidate by 172,043 votes; • Rs. 1 lakh crore Jawaharlal Nehru National Urban Renewal Mission covering 60 cities to be set up; **23.** India tops the list of Global IT and BPO services locations 2005, China and Malaysia are second and third in A.T. Kearney's survey • Indonesian President Yudhoyono in New Delhi • BRO employee Maniappan Raman Kutty abducted by Taliban in Afghanistan slaughtered, body found in Nimroz province, Govt. announces Rs. 10 lakh relief for family • Three CRPF jawan killed in fidayeen attack in Srinagar; **24.** In Bihar Nitish Kumar sworn in Chief Minister, the first NDA government of JD(U) and BJP • IFFI festival begins in Goa • Opposition demands resignation of UPA chairperson Sonia Gandhi, and forces adjournment of both Houses of Parliament over the Volcker Committee report; **25.** Sensex closes at an all-time high of BBS3.21 • Rolls - Royce set up an Indian subsidiary, in a tie up with QUEST • Ramankutty Maniappan, the BRO employee killed by Taliban, cremated in Kerala with full State honours • Rabri Devi is elected RJD leader, thus becoming Opposition Leader in Assembly; **26.** 145 passengers feared killed when

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two buses are washed away in floods in Tamil Nadu - one at Puttukottai and the other at Sanaveli • Gold reaches a new high of Rs. 7400 per 10 gms • Mizoram passes the Organic Farming Act, the first state to do so • Vijaypat Singhania becomes the first man to sail at 69,852 feet above sea level on a hot air balloon • Government to deploy women commandos as sky marshals • Tension mounts in Shiv Sena with difference between Raj Thackeray and cousin Uddhav • Sachin Tendulkar is back among the top 10 in the latest LG-ICC Test players rankings; **27.** India Economic summit 2005 in New Delhi • Raj Thackeray resigns from Shiv Sena's executive committee • National Security Adviser M.K. Narayanan says abduction and killing of BRO employee Maniappan Kutty in Afghanistan was the result of a 'conspiracy' between Pakistan and Taliban • Aishwarya Rai is to star in the new Asterix and Obelix film; **28.** FI investments takeensex to above 9000, for the first time; market cap soars to a record Rs.23.56 lakh crore • Investment of Rs. 10,000 cr. expected in special economic zone infrastructure in the next three years • Rupee breaches the 46-mark again • Defence Minister Pranab Mukherjee tells Lok Sabha that NSA was misquoted, and Govt. had made all possible efforts to get the release of Ramankutty

Maniappan. Pakistan had expressed inability to help as it didn't have relations with Taliban • Kanchi Sankaracharya appears before the Sessions Court in Pondicherry in the Sankararaman murder case • Gold is Rs. 7585 / 10 gm; **29.** Amitabh Bachchan, now in hospital, has collitis • Sharad Pawar is elected President of BCCI, ending Jagmohan Dalmiya's 21-year-old hold on world's richest cricket body • Prime Minister Manmohan Singh wants India, averaging a 7.5% growth now to target 10% growth in two to three years • Dual citizenship for PIOs to be launched in January 2006 • Shivaraj Singh Chauhan sworn in 28th Chief Minister of Madhya Pradesh; **30.** Uma Bharti, senior BJP leader and recently appointed General Secretary, suspended • Amitabh Bachchan undergoes surgery for an intestinal problem • A study by a private agency puts ONGC as the biggest wealth creator - Rs. 103,000 cr. in 2000-05 • RBI to set up an independent body called The Banking Code and Standard Board of India by Jan.1 • Border Security Force (BSF) to raise a women's battalion.

December

Sachin, No.1 test century taker

1. President APJ calls for creating a network of rivers in

Tamil Nadu by interlinking the Cauvery with other rivers ; **2.** Rupee dives to a fresh 14-month low of 46.11 against the dollar • Finance Minister Chidambaram says the rising movement of the stock market index reflects the buoyancy and confidence in the economy • Dual citizenship scheme launched for overseas Indians, except in Pakistan and Bangladesh • NDA steps up its offensive against UPA govt. on the Volcker Reports and asks for Sonia Gandhi's resignation ; **3.** Prime Minister Manmohan leaves for Moscow on a three-day visit. • CJI Y.K. Sabharwal says 26 m. cases are pending before different courts in India, of which 18 m. are criminal cases • Indian mutual fund industry registers a 30 percent growth, says AMFI chairman A.P. Kurian; only-one percent of people have invested in mutual funds; **4.** Sijo Jose, in the custody of US-led forces in Iraq for four months, released • Taliban denies killing BRO employee M.R. Kutty • Golden Peacock at IFFI goes to Iran's 'Iron Island' (dir. Mohd Rasoulof) • Bajrang Dal activists in Mumbai beat up three people distributing copies of the Bible; **5.** Chipmaker Intel to invest \$1 b. in India • Bill Gates arrives in India for a four-day visit • Natwar Singh dropped from Congress Steering Committee • On-screen smoking ban to be effective from Jan.1 • SC stays Wakf Board order on

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Taj Mahal • Prime Minister Manmohan Singh is conferred the title of Professor Honoris Causa at Moscow University; **6.** MUL is recalling 2217 Versa vans to fix a possible fault in the exhaust system • Union Minister K. Natwar Singh announces resignation, following the Volcker Report controversy • Major R.S. Rathore wins the gold in double trap event at National Shooting Championship • Naushad, a Keralite in Saudi Arabia, is directed by court to give one eye to the person whose eye was lost during a scuffle with him; **7.** EPF interest rate fixed at 8.5% for 2005-06 • Kerala Chief Minister to take up with Prime Minister the case of Naushad, a Keralite in Saudi Arabia who will lose an eye if a court verdict is implemented • The Left says they are ready for talks on sale of shares of profit-making PSUs • Microsoft to open offices in 33 Indian cities and to invest \$1.7 b. over the next four years • Indian Airlines has a new name, 'Indian', and a new logo inspired by the Sun Temple at Konark • Cell phone users are 55.31 m. now; **8.** Gold sets new record at Rs. 7885/10 gm. • Shamilla Tagore is appointed Goodwill Ambassador for UNICEF in India; **9.** Sensex reaches 9067 • Government rules out any enquiry by a JPC into the Volcker Committee report; **10.** Sachin Tendulkar is world's highest test century maker as he surpasses Sunil

Gavaskar's record of 34 centuries at the Ferozeshah Kotla, Delhi • Cyclone 'Fanoos' weakens into a deep depression; **11.** Amritsar-Lahore bus (through the Wagah border) has trial run in Islamabad • Prime Minister Manmohan Singh leaves for Kuala Lumpur to attend ASEAN meet • Gangster Abu Salem is suffering from insomnia and memory loss • The Centre to set up a National Commission for Child; **12.** Gold prices cross Rs. 8000 - mark • Parliament is rocked by a new corruption expose aired on Hindi news channel Aaj Tak video footage showing 11 members taking money in order to raise questions in the House • Disaster Management Bill passed by Parliament • BJP-ruled States to adopt VAT • Karnataka to change Bangalore's name into Bengalooru next year • Pune airport turns international • BSE Sensex crosses 9200 mark • MFs and FIs allowed to participate in gold, silver and crude futures; **13.** Earthquake of 6.7 magnitude hits parts of Kashmir, Pakistan and Afghanistan • Rajya Sabha member C.S. Lodha suspended • A 6.8 intensity tremor jolts Kashmir again; **14.** Uttaranchal hit by earthquake (5.2 on Richter) • Narayana Murthy of Infosys ranked eighth in the list of world's most admired business leaders in a study by Burson-Marsteller with Economist Intelligence Unit • MUL has plans to make a luxury sedan (code Y4)

by mid-2006, at Rs.9 to 10 lakhs; **15.** SEBI unearths a large-scale multiple application case in the recent YES Bank IPO • Women constitute only 6 p.c. of total workforce in corporate houses • Kolkatans come out in protest against Saurav Ganguly being dropped from the Indian team • Uma Bharti wants L.K. Advani to resign • Jagat Singh, son of Natwar Singh, questioned by Enforcement Directorate for seven hours; **16.** Exclusion of Saurav Ganguly from cricket team raised in Lok Sabha • Steel tycoon Lakshmi Mittal (\$20 b.) named the richest Indian by Forbes Asia's second annual list of the 40 richest Indians • VAT to be introduced in six more States in April, 2006 • Li Shaohong's 'Stolen Life' (China) bags the Golden Crow Pheasant Award (Suvarna Chakoram) (best feature film) and Chinese director Lu Chuan wins best director award at International Film Festival of Kerala; **18.** Demolition of illegal constructions in Delhi in progress • 42 die and 37 seriously injured in stampede at a flood relief centre in Chennai • Raj Thackeray resigns from Shiv Sena • More Karnataka cities to have new names from November next • President Kalam hands over certificate of 500 houses for tsunami victims constructed in Amritanadamayi Math, Kollam in Kerala; **19.** Government to divest 8 percent Maruti • Sensex closes at 939



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after touching all all-time intra-day high of 9402.68 • Wipro acquires Austrian chip design firm New Logic for Euro 47m. • Air Sahara wins the rights for the sponsorship of the Indian cricket team • Hindustan Latex launches 'Confidom', the country's first female condom • 178 cotton farmers of Vidarbha commit suicide this year • 88 buildings bulldozed in Delhi, as protests continue; **20.** Constitution Amendment Bill to reserve seats for socially and educationally backward classes in private unaided educational institutions tabled in Lok Sabha • Assam CM offers safe passage to ULFA leaders whenever they come for direct talks with the centre • P.A. Sangma returns to NCP • Pfizer launches Viagra in the Indian market • FII investments in India in 2005 put at \$10 b; **21.** Street protests follow beating up of young couples in a park in Meerut; UP Govt. orders an enquiry • Constitution (104th Amendment) Bill passed in Lok Sabha, providing reservation for SCs & STs in unaided private educational institutions • • Amritsar-Lahore bus service to commence on Jan.20 • India's first wax museum to be set up at a water amusement park at Kanyakumari, Tamil Nadu • Supreme Court holds that marrying an upper class Hindu won't give a SC/ST woman the SC/ST status; **22.** India beats Sri Lanka by 259 runs in 3rd and final Videocon Cup Test. Anil

Kumble, in his 100th game, finishes with 5 wickets in second innings • INSAT-4A launched successfully, the first to meet the needs of DTH tv service • Mobs go on rampage in Morena, M.P., protesting murder of former BSP President P.P. Chaudhary and son • Pawan Kumar Bansal Committee finds 10 M.P.s guilty in 'cash for questions' scam • Platinum jubilee celebrations of Kerala Kalamandalam begin ; **23.** Eleven M.P.s, 10 from Lok Sabha and one from Rajya Sabha, expelled in connection with 'cash for questions' scam - a development unprecedented in the history of parliamentary democracy • Cold wave death toll in northern India reaches 65 • Demolition by Municipal Corporation in Ulhasnagar, Mumbai, where 855 illegal flats have been named, resumed; **24.** Former Chief Minister Rajnath Singh tipped to take over as BJP President • Saurav Ganguly is recalled to the Indian team squad for the tour of Pakistan • Fog engulfs most parts of north India • IGNOU launches a full-time PG course in community cardiology; **25.** UN peacekeeper from India killed in an attack by Ugandan rebels in DR of Congo • Earthquake of 5.8 felt in Srinagar • A.B. Vajpayee is 81 • Four RPF men gunned down by Maoists in Visakhapatnam; **26.** Sensex plunges by 171 points • BJP national executive meets in Mumbai • Government not to

collect user's fee from passengers from CIAL from Jan.1 • BSP expels four of its MPs including three who were involved in the 'cash for questions' scam • Home Minister says India needs Rs.35,000 cr. to cope with the major natural disasters that struck India over the past one year; **27.** Sensex surges by 197 points • Bird flu is on national disaster list • Railway ticket cancellation charges almost doubled in a bid to discourage touts • BJP General Secretary Sanjay Joshi resigns following a sex scandal • Sri Lankan President Rajapakse's maiden visit to India • Mass grave unearthed in Gujarat's Panchmahal district. Skeletons found are reportedly of those killed in Godhra riots; **28.** Unidentified gunman attack IISc, Bangalore killing an IIT professor and injuring three others • Sri Lankan President Rajapakse and Prime Minister Manmohan Singh agree on the urgency to begin talks to revive the peace process • 50,000 houses for families affected by development projects in Mumbai opened by Sonia Gandhi • Underworld operator Abu Salem put to lie detector test • Bollywood superstar Aamir Khan ties the knot with Kiran Rao, his longtime beau • Centre asks Gujarat government to submit a report on the mass grave found in Panchmahal district; **29.** A forged currency note delivered at an ATM at Kolkata; AITUC

wants an inquiry • SEBI recommends short selling by institutional investors • Chief Minister confirms that the terror attacks on IISc, Bangalore was the handiwork of terrorists; IT firms step up security • Rubber price reaches Rs. 71 per kg • Cabinet clears a proposal for declaring Jaipur an international airport • Bihar P.S.C. Chairman

Ramsinghasan Singh arrested for alleged involvement in irregularities in appointments; 30. BSE ends the year at 9397.93, a gain of 42% in 2005; sensx is third best in Asia • BSNL cuts fixed line rental by 28% • Rural indebtedness is 27 percent, as compared to 23 percent in

1991 • LeT hand suspected in Bangalore IISc strike • According to Assocham, India's trade with SAARC countries, now Rs.25,000 cr., may touch 50,000 cr. by 2010, and 100,000 cr. by 2015 • A.B. Vajpayee to retire from active politics; 31. • L.K. Advani resigns as BJP President.

January, 2006

Sania Mirza, Youngest Padma Shri

1. India and Pakistan exchange list of their respective nuclear facilities • Rampur-Shyamchak village of Vaishali district (Bihar) witnesses burning to death of a woman and her five children, after her hus-

band refuses to withdraw a police complaint about the theft of a buffalo • An Assocham study puts the corporate tax paid by top 50 business houses in 2004-05 at Rs. 8,995 cr. • 12-year-old Panimaran Negi becomes the youngest IM • India's forex reserves stood at \$144b. on Dec. 23; 2. Prime Minister Man-mohan Singh spells out implementation, investment and infrastructure and employment generation as priorities for 2006 • 93rd Indian Science Congress inaugurated by Prime Minister in Hyderabad • Police bust a terrorist plot in Hyderabad, seizing explosive devices and arresting two • Air Sahara

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offers New Delhi-London trip at Rs. 10,000 (return fare) on first-come first-served basis • 2500 Shiv Sainiks quit the Sena and join Raj Thackeray • Protest against proposed steel plant results in death of five tribals in police firings; 3. Sensex closes above 9500 with 719 stocks hitting upper circuit on BSE • Prime Minister calls for a second Green Revolution, with focus on non-food crops, horticulture and new plant varieties • A top militant of LeT, Abdul Rahman, arrested in connection with terror attack on IISc; 4. The number of BSNL mobile subscribers reaches 14 m.; 5. Railways opens up containerised operation to private sector • Chilly weather prevails in north India with 177 deaths so far; • Allahabad HC strikes down AMU Amendment Act conferring minority status to the university • 5-MW solar plant to be set up in Rashtrapati Bhavan; 6. French ship *Clemenceau*, headed towards India, should not enter the country, recommends Supreme Court Monitoring Committee on Hazardous Wastes Management • Munnabao-Khotrapar rail service to be resumed from Feb. 1 • Left airport to be renamed Kushok Bakula Rimpoche airport, after the Head Lama of Ladakh • C-DAC to release software tools and fonts in seven more Indian languages • Four new members added to CWC • First unmanned Aerial Vehicle squadron of Indian Navy commissioned; 7. Voting rights to be granted to overseas Indians; 8. Delhi's coldest day in 70 years, temperature 0.2°C • AMU to appeal against Allahabad HC judgement scrapping its minority status • NCP leader Sharad Pawar rules out formation of a Third Front • Gyanpith Award goes to Marathi poet Vinda Karandikar • Kashmir's Dal Lake freezes; 9. BJP alleges that telephones of its senior leaders including L.K. Advani were tapped during the Volcker controversy; 10. Government says it will completely exit Maruti Udyog Ltd. • Maharashtra bans James Laine's book 'Epic of Shivaji' • UPA govt. is committed to completing NDA govt's Golden Quadrilateral project; 11. Air India to buy 68 Boeing aircraft at a cost of Rs.35,000 cr. • Infosys Technologies employee headcount to reach 50,000 soon; 12. SEBI unearths another IPO scam in IDFC, where a few investors opened over 14,000 demat accounts • Government sells 8 percent of its stake in MUL, earning Rs. 1567 cr. • Sania Mirza seeded No. 32 in Australian Open Singles • Airport modernisation by AAI is acceptable, say Left parties • NGOs want field trials of Bt Cotton banned • US senator John Kerry, in Delhi, wants fissile material cut-off included in the July 18, 2005 nuclear deal with USA • Domestic Mutual Funds equity assets reach Rs. 75,000 cr; 13. 59 Indians are among the 362 Haj pilgrims killed in the Mina stampede • Fiat cars to be marketed through Tata dealerships • Forex reserves rise to \$ 139.352 billion; 14. Arundhati Roy turns down the Sahitya Akademi award • Maharashtra governor S.M. Krishna signs the controversial ordinance seeking to regularise illegal buildings in Ulhasnagar • An imam with LeT links arrested in Mumbai • Animal Welfare Board gives the green signal to Aamir Khan's 'Rang De Basanti', as there is nothing objectionable regarding the treatment of animals in the movie; 15. Singapore invites Indian institutes of repute to set up campuses there • BJP asks Prime Minister to ensure that the two bank accounts of Italian businessman Ottavio Quattrocchi, lying frozen for the past 30 months, remain frozen • Second snowfall in the month cuts off Kashmir valley; 16. Pak-trained LeT militant Habeeb arrested in Almati • SC issues notice to LS Speaker on expulsion of an MP in connection with "cash for question" scam • Supreme Court disallows entry of the controversial ship *Clemenceau* into India till Feb. 13; 17. HRD Minister says IIMs cannot establish campuses abroad 'as of now' • A.K. Telgi of the fake stamp paper scandal and two associates sentenced to 10 years R.1; 18. Crisis in Karnataka as there is a division in JD(S); H.D. Kumara-

swamy to withdraw support to Congress; **19.** Jet Airways buys Air Sahara for \$ 500 m • Rubber hits a historic high of Rs.75 a kg; **20.** Inflation rate falls to 4.24 p.c. • Kerala High Court rules that marital status is no bar to study nursing • Delhi High Court stays the operation of a CBSE circular that made it mandatory for all affiliated schools to provide free education to every single girl child of a parent from class VI • Tamil Nadu Court lifts the ban on recruitment; **21.** 82nd plenary session of AICC begins in Hyderabad; **22.** Saudi Arabia repeals the court sentence to gouge out Keralite migrant worker P.V. Naushad's eye • In Karnataka, H.D. Deve Gowda supports his son H.D. Kumaraswamy, dashing the chances of a Congress coalition; **24.** Government opens up the retail sector to FDI • SC holds that Governor Buta Singh misled the Centre in recommending the dissolution of the state assembly. It says that constitutional norms were 'perversely' subverted for helping a political party • First bus from Amritsar to Lahore leaves • Ganesh Bank of Kurundwad merges with Federal Bank • Seven banks are penalised by RBI in the IPO scam; **25.** The popular quiz show 'Kaun Banega Crorepati' to be stopped, owing to Amitabh Bachchan's poor health • President APJ says need of the hour is disciplined action by every citizen • NDA demands the resignation of Prime Minis-

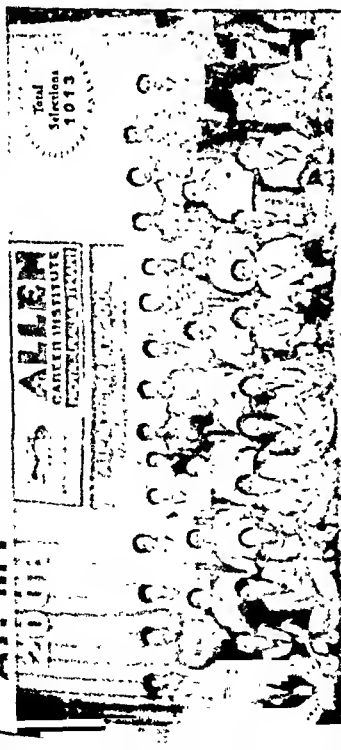
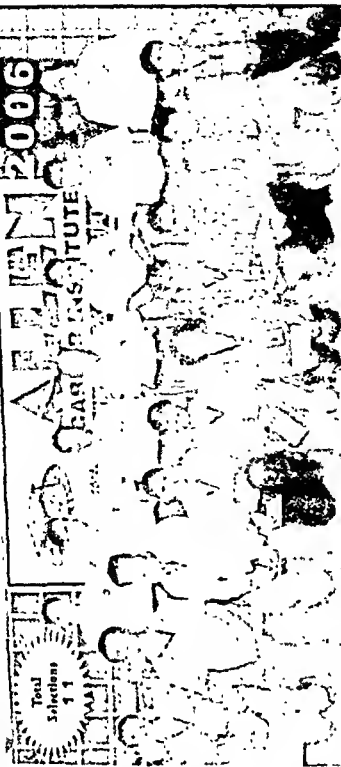
ter and Governor Buta Singh; **26.** Republic Day Awards announced: Padmavibhushan to 9, Padmabhushan to 36 and Padmashri to 61. Adoor Gopalakrishnan, Mahashveta Devi, Nirmala Deshpande, Norman Borlaug among Padmavibhushan awardees. Sania Mirza is the youngest to get Padma Shri. • King Abdullah of Saudi Arabia is Chief guest at Republic Day Parade in Delhi • Bhuta Singh resigns as Bihar Governor • RBI allows banks to appoint NGOs, micro finance agencies, P.O.s and NBFCs to act as banks' Business Correspondents • Govt. is targeting an FDI inflow of \$10 b. during the next fiscal, says Commerce Minister • ISRO thinks mobile TV will arrive in three years; **27.** 8th World Spice Congress opens in Chennai • Trial run of Amritsar-Nankana Sahib bus • Gold is Rs. 750 per gram • L.N. Mittal launches a \$ 22.7 b. take over bid for Arcelor, world's second largest steel producer • Sensex crosses 9800 mark • Central Council of ICAI decides to prefix 'CA' to the name of a chartered accountant • Karnataka Chief Minister Dharam Singh resigns; **28.** Karnataka deadlock: Assembly adjourned without CM Dharam Singh seeking confidence vote as directed by Governor • H.D. Deve Gowda resigns as JD(S) president • 260 m. Indians (26 %) are still below poverty line, says the first Social Development Report; Orissa has the highest

number • Governor invites H.D. Kumaraswamy to form the Government in Karnataka; **29.** 14 people, including eight priests, injured in BSF firing on the premises of Kamakhya temple, Guwahati • 10th Grand Slam and third mixed doubles crown (with Martina Hingis) for Mahesh Bhupathi • S. Sreenath is in team India again to play ODI against Pakistan • Union Cabinet reshuffled and expanded with the entry of Sushil Kumar Shinde, A.R. Antulay, Murali Deora, Vayalar Ravi, Ambika Soni, etc. Ten Cabinet Ministers, one MOS with independent charge and 11 MOS sworn in • Chhattisgarh tableau adjudged the best in Republic Day parade • Nandan Nilekani of Infosys becomes a member of the World Economic Forum Foundation board; **30.** Rubber RSS 4 is Rs. 7850 for a quintal • Left parties demand US ambassador David Mulford's recall • New Delhi to vote against Iran at IAEA meeting in Vienna, if it is called upon to make a choice; **31.** Airport modernisation programme takes off - Delhi airport is allotted to GMR group, and Mumbai to GVK group • President A.P.J. leaves on a 10-day tour of Singapore, the Philippines and S. Korea.

February

Sensex Crosses 10,000 Mark

1. Sections of AAI employees strike work protesting air-



ACHIEVEMENTS OF THE YEAR 2006

NATIONAL LEVEL

AIIMS 11

AIPMT 1013 (in Mains)

27 In Top 100

DUU-PMT 20

3 In Top 10 (in General Category)

STATE LEVEL

RAJASTHAN PMT 1205

7 In Top 10 (General Boys Category)

9 In Top 10 (General Girls Category)

8 In Top 10 (OBC Boys Category)

6 In Top 10 (OBC Girls Category)

MRPMT 117

8 In Top 10

(According to Marks in Unreserved Category)

37 In Top 100 (in Unreserved Category)

CG-PMT

202 (in PMT Rank 600)

9 In Top 10

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port modernisation • Prime Minister says the economy is moving toward a sustainable growth rate of 8 to 10 p.c. • C tells Centre and State governments it is their duty to protect children between 6 and 14 in schools • Centre gives its nod to IIMs to go global; **3.** India achieves prevalence rate of less than 1 per 10,000 population, in eliminating leprosy, as on Dec. 31, 2005; **4.** The 4-day airport strike by over 20,000 employees called off • Job reservation move in private section gets weak as GoM says the radical measure is not possible within the framework of the Constitution; **5.** Trade unions to protest outside French embassy to stop entry of the decommissioned ship Clemenceau into Indian waters • Left parties demand a full debate of Iran nuclear issue • Supreme Court says a person working with a government department on contract basis is not a 'government servant' • Study finds that Goa has the highest incidence of breast cancer in India; **6.** Sensex crosses the 10,000 point mark, for the first time. Climbs by 238 points and closes at 9980.42 • Government 'redeploys' about 5000 troops in J&K to West Bengal due to an improvement in the situation • Pravasi centres to be opened in embassies to address problems of NRIs • 12 policemen die as Naxals raid a police station in two attacks in Chhattisgarh and Jharkhand •

The Ambani brothers clash over delay in completing demerger formalities • Kerala rated by World Travel and Tourism Council as one of the major tourism destinations in the world along with Greece and Mexico; **7.** Sensex closes above 10,000 points (10082.28) for the first time ever • Maharashtra to enforce a thickness-specific ban on plastic carry bags - minimum permissible thickness is 50 microns • Raj Babbar suspended from Samajwadi Party for 'levelling baseless charges' against General Secretary Amar Singh • IIT-Madras to offer M.A. Programme in humanities; **9.** Government to set up a mail regulatory and development authority (MRDA) • Curfew imposed in Leh after clashes between Muslims and Buddhists triggered by reports of alleged desecration of the Quran at a mosque in Kargil; **10.** Government to amend the Foreigners' Act • Eight CISF jawans killed in Naxalite attack in Chhattisgarh • E-passports likely by 2013 • Fast-track craft INS Bangaram joins naval fleet; **11.** Muslims hold countrywide demonstrations denouncing the Prophet cartoons in a Danish newspaper and burn the Danish flag; **13.** Following Justice Rajinder Sachar Committee's seeking details from the Army on the number of Muslims in its employ, PMO explains that the information was being sought from all departments and agencies; **14.** Earth-

quake (5.7 magnitude) hits Sikkim, damaging roads and buildings including the Raj Bhavan and a monastery • Army submits data on the number of Muslims in its ranks to Defence Ministry but requests that the information be not given to the Rajinder Sachar Committee • Prime Minister says, in reply to Left attack on Iran policy, government's tactics and strategy will change with the ever-changing world's reality • Total number of phones in India reaches 130.8 m, with a teledensity of 11.7%; **15.** India's fastest train, Delhi - Bhopal Shatabdi Express, flagged off - the 198 km Delhi-Agra stretch to be reduced by half an hour. • Maharashtra has the highest number of houses without power - 38 lakh rural households in 744 village have no electricity; **16.** Dawood Ibrahim's nephew Samir Wagle arrested • IISCO merges with its parent body SAIL • 64 sitting West Bengal MLAs including eight ministers not to figure in upcoming Assembly elections • SemIndia to set up Fab City in A.P. • China says it fully supports the New Delhi - Washington nuclear pact • French President opposes the \$ 23 b. L.N. Mittal bid to take over Arcelor • France to offer India the Rafale multirole fighter in place of Mirage-2000-5 fighter; **17.** Lok Sabha speaker asks MPs facing an inquiry into their conduct in the implementation of MPLAD scheme not to attend

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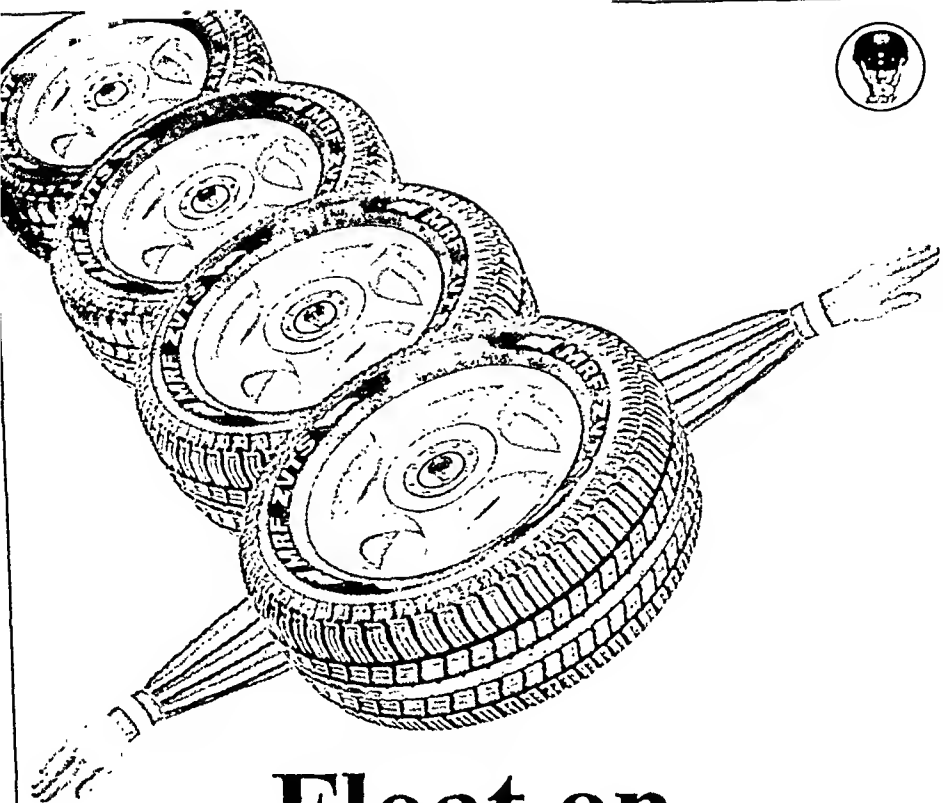
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House • Indian corporates raised \$ 12 b. in 2005 from overseas market • Inflation comes down to 4.08 p.c. • Rangarajan Committee recommends Rs. 75 hike per LPG cylinder • Violence breaks out in Hyderabad during a protest against the pictorial depiction of the Prophet; **18.** First cases of bird flu detected in Maharashtra's Nandurbar district - 50,000 birds die, 8 people hospitalised with suspected bird flu • ED questions Natwar Singh, in the oil-for-food scam • Demonstration in Lucknow against publication of caricatures of Prophet Muhammad H.D. Deve Gowda suspends chief minister Kumaraswamy and 39 other rebel MLAs from D(S) following their tie-up with BJP to form a coalition government in Karnataka • Pakistan and India resume a train service across the Thar desert, 40 years after it was suspended - Karachi • **19.** • Lakshmi Mittal expresses confidence in winning the acquisition of Arcelor, despite opposition from European governments P.A. Sangma (NCP) wins Tura Lok Sabha seat in Meghalaya for the ninth time, in by-poll • Assocham thinks trade with France will touch 10 b. euros by 2010, as a result of Chirac's visit • Indians bought 4.3 m. personal computers in 2005 • 25 injured in an explosion at Ahmedabad railway station; **20.** Fatwa against the Danish cartoonist issued by a Shariat

court in A.P. • About 80 % of the 8.5 lakh chickens in Navapur farms destroyed, restrictions on import of poultry imposed in various states • Neighbouring countries shut their borders to poultry from India • MPs demand recall of US ambassador David Mulford • A five-acre prime land in Hyderabad fetches a record price of Rs.335. 25 cr. • Christian Dior, French fashion company, opens its first outlet in India; **21.** Sensex touches all-time high of 10168.11 • Union Minister Pawar says the bird flu is confined to a small area • Culling of birds continues in Maharashtra and Gujarat • Government asserts that armed forces recruitment is based on merit and open to all citizens • PDP chief Mehbooba Mufti calls for declaring J&K a 'free trade zone' • President Kalam wants more Indian companies to storm into the Fortune 500 list in a big way • Lok Sabha celebrates International Mother Language Day • Poultry industry's loss in Navapur district put at Rs. 20 cr. National loss put at Rs. 200 cr. per day; **22.** Sensex pierces the 10,200 - mark • French nuclear energy giant Areva is reportedly keen to enter Indian market • Bird flu is ruled out in Chilika lake where 1700 migratory birds are found dead • India might go in for three more Russian stealth ships; **23.** ISD calls to be 23 p.c. cheaper from March 1 • Three sailors killed in blast in warship

at Vizakhapatnam; **24.** Lalu Prasad Yadav presents railway budget: no rise in freight rates or passenger fares, charges on e-tickets reduced, 55 pairs of new trains introduced, AC fares reduced • Nine people given life term in Best Bakery case, eight freed • Supreme Court asks Chief Minister Jayalalithaa to set an example by presenting herself in court in the income tax case pending against her in Chennai • Harrods of London to buy 120 tonnes of Indian tea this year • Bihar government announces a judicial enquiry into the 1989 Bhagalpur riot case • Electronic registration of companies to begin on March 6; **26.** Car bomb blast on the outskirts of Srinagar injures eight • RSS abolishes the post of party spokesman • Four national medicinal plant processing zones planned • Delhi's Maurya Sheraton Hotel where George Bush and party will stay declared a high security zone • Culling operation completed in Surat district • Government has a scheme to provide free power connection to families below the poverty line • 80 p.c. of rural Bengal yet to be electrified, says Power Minister Shinde • RSS demands immediate scrapping of the Rajender Sachar committee on status of Muslims; **27.** Actor Aamir Khan seeks Rs. 21 cr. compensation from Filmfare for using his photograph and a quote without his permission • Economic Survey 2005-06 projects 8.1%



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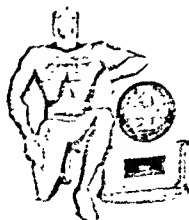
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growth • Assam changes its name to Asom • Chicken and egg are back on the Railway menu, but not half-boiled eggs, fried eggs, omelette and roasted chickens • The CD containing alleged conversation transcripts of Amar Singh is being examined by Home Ministry • MPs demand retrial of Jessica Lal murder case; **28.** P. Chidambaram presents 2006-07 budget • Mulayam Singh Yadav wins U.P. trust vote.

March

George Bush in India

1. US President George Bush arrives in New Delhi for a three-day visit • Sensex shoots up 195 points to reach 10565 • RBI to allow more banks to import gold • Vizag port crosses the 50-million tonne mark again this year • Election Commissioner announces the schedule for elections to West Bengal, Tamil Nadu, Kerala, Assam and Pondicherry, from April 3 to May 8 • Abu Salem has allegedly confessed to having delivered three AK 56 guns, handgrenades and ammunition to actor Sanjay Dutt • The investigation of SNC Lavalin case to be handed over to CBI • ICICI Bank enters Russian market • Ruckus in Parliament over the naxal attack on civilians in Chhattisgarh • Deve Gowda leads anti-Bush protest in Bangalore • Rally in Delhi by Muslims against Bush visit; **2.** Sensex soars to 10,700 • Prime Minister Manmohan Singh and US President George

Bush reach an understanding on civil nuclear cooperation • Supreme Court holds that State governments could not levy sales tax on services provided by telecom companies to consumers • Top CEOs from India and USA moot the creation of a \$5 b. fund to boost infrastructure development • Rajya Sabha passes a Bill to amend the Minority Education Act for giving more teeth to the Commission set up under the Act • USA likely to lift the ban on Indian mangoes • Left rally in New Delhi against Bush visit; **3.** George Bush seeks lifting of FDI caps, transparency and greater market access for US goods. Before leaving India he says that the two countries are closer than ever before • Maharashtra government to take stringent action against striking doctors • U.C. Banerjee Committee holds that the fire in Sabarmati Express at Godhra on Feb. 27, 2002 was accidental • Government says bird flu is totally under control in Maharashtra • Ratan Tata says Tata Power is interested in building a nuclear plant • President Bush visits N.G. Ranga Agricultural University in Hyderabad, and addresses an invited audience at the Purana Qila in Delhi • Human Resource Development Ministry to grant IIT status to CUSAT • US Consulate to be opened in Hyderabad in Oct. 2005 • Three persons killed in riots over Bush visit in Lucknow • IT companies get a reassurance from George Bush

who rejects 'protectionism' against outsourcing of jobs • Rajya Sabha passes the Contempt of Courts (Amendment) Bill • Vaiko's MDMK joins Jayalalithaa camp in Tamil Nadu; **4.** Uttaranchal Chief Minister N.D. Tiwari submits resignation • 760 striking doctors in Maharashtra issue termination notices • Mob-police clashes following rioting in South Goa over the demolition of a structure used by a minority community for prayers • The longest (22.20 km) cave system in the Indian subcontinent discovered in Meghalaya's Jaintia Hills district by an international team of speleologists; **5.** United Democratic Alliance of seven parties led by Congress launched in Kolkata • Maharashtra doctors' strike enters 7th day • About 100 families of the minority community evacuated from Curchorem-Sanvordem in Goa, where vehicles, shops and petrol pumps were damaged in two-day riots • Swaraj Paul to become the first Chancellor of the University of Westminster, London • PAN becomes mandatory for demat accounts with SEBI; **6.** Prime Minister says India is not for change in Iran regime • India and Australia agree that the possible supply of uranium to New Delhi will be discussed by a group of officials • Monsanto agrees to cut the price of its GM BT cotton seed by Rs.300 per packet of 450 grams • Jaya Bachchan's mem-

bership in Rajya Sabha is questioned, because of her holding an office of profit as chairperson of Uttar Pradesh Film Development Corporation • Sensex reaches a new peak, at 10742.31 • Australia gives \$25 m. research assistance to India • Gujarat High Court asks UPA government not to table Banerjee panel report in Parliament; 7. IOC given government approval for Rs.7500 cr. investment in oil exploration • India signs Preferential Trade Agreement with Chile • India needs to import 1.5 m. more tonne wheat; 8. Finance Minister asks States to 'spend' more, as they are sitting on huge cash surplus of Rs.50,000 cr. • Sensex falls by 216.82, the biggest drop in four months • Pentagon official to visit Anand to learn from its rural development experience for the reconstruction work in Afghanistan • Walt Disney Company (India) to showcase 'Hanuman', the animation feature • President Kalam leaves for five-day visit to Myanmar and Mauritius • President Kalam says the thorium route will give India abundant nuclear fuel in 5 to 7 years • Two Lashkar terrorists believed to be responsible for Varanasi blasts, killed • Supreme Court sentences Zahira Sheikh, key witness in Best Bakery case, to one-year imprisonment and imposes Rs.50,000 fine for contempt of court by making false statement on oath and for false affidavits; 9. IRDA asks insur-

ance companies to keep a watch on large premium payments • TRAI recommends implementation of number portability in mobile telephony by Apr. 2007 • Raj Thackeray's new party Maharashtra Navnirman Sena launched • Uttar Pradesh Assembly passes a Bill to exempt heads of corporations, boards, and councils from being categorised as 'offices of profit' • India signs MoU for gas pipeline passing through Mizoram, and skipping Bangladesh • Kerala's Land Revenue Commissioner K.J. Alphons Kannanthanam resigns from IAS to contest for a seat in the Assembly; 10. Sensex at all-time high of 10,765 points • Forex reserves rise to \$143.148 b. • 27 Indians, led by Lakshmi Mittal (5th place in the rich men's club) in the list of Forbes billionaires • Notice issued by Election Commission to Amar Singh, Samajwadi Party general secretary, on a complaint • Sabir Bhatia to relaunch his travel portal Arzoo.com • Zahir Sheikh of Best Bakery case surrenders in Mumbai; 11. Anil Kumble takes his 500th Test cricket at Mohali - the first Indian to do so • India and China discuss border issue in New Delhi • President Kalam in Mauritius • G-6 meeting in London, with USA, EU, Brazil, Japan, Australia and India participating; 12. PWC study forecasts 19% growth in India's entertainment and media industry by 2010 • Central Sales Tax to be phased out by

2009 • India and China discuss border issue at Kumarakom in Kottayam, Kerala; 13. India to help Mauritius' sugar and textile sectors • Sensex touches new intra-day high of 10884 • The 7th round of talks between India and China on the boundary dispute conclude at Kumarakom • India issues new rules on export of nuclear equipment and technology • Hyundai Motor India rolls out its one millionth car, plans to make 6 lakh cars by 2007 • Courier industry asks government to reconsider Post Office Bill • L.K. Advani's proposed national integration yatra to commence on April 6 from Gujarat and Raj Nath Singh's yatra from Orissa • BSNL and MTNL propose to invest Rs. 20,000 cr. to install an additional 60 m. lines in the next three or four years; 14. Prime Minister says it is in our national interest to engage with USA, but it does not mean India is surrendering its national interest • Avian flu cases detected in Maharashtra's Jalgaon district • Russia will supply uranium fuel for the Tarapur reactor • Kerala to press for having the Mulleperiyar dam rebuilt by Tamil Nadu to ensure safety of people living in the downstream areas • Lok Sabha members named in the MPLADS scam not to be expelled; Committee recommends only reprimand and suspension till Mar. 22; 15. India beats China in textile exports • In reply to US objection to Russia's decision to supply

light enriched uranium for Tarapur, India says if the US laws are amended that country can also supply LEU to India; **16.** 20,000 birds culled in Jalgaon • Russian Prime Minister Mikhail Fradkov arrives on a two-day visit • NDA asks President to remove Election Commissioner Navin Chawla for his alleged links with the Congress • Kunjirani Devi wins a gold at the Commonwealth Games, Melbourne; **17.** Sensex touches 10,951 and closes at 10,860 • Jaya Bachchan disqualified from the membership of the Rajya Sabha • Violence between residents of Ghansoli village in Mumbai results in three deaths • Best tourism state award given to Kerala; **18.** Prime Minister calls for full convertibility of the rupee • Visit of Denmark Prime Minister Rasmussen to India cancelled after New Delhi says this was 'not the optimal time' for the tour • Two IAF pilots die as Suryakiran jet crashes in Bihar • Lok Sabha members make a strong plea for taxing rich farmers and raising corporate tax; **19.** Government says there has been no human bird flu cases so far • Partnership between Anna Varsity and Microsoft announced • Madan Lal Khurana, former Delhi chief minister, suspended from BJP; **20.** V. Kurien, known as India's Milkman, resigns as chairman of GCMF (Amul) • Amul launches sports drink 'Stamina' • TRAI proposes Rs. 5 cr. as convergence fee, in place of Rs. 107 cr. suggested

earlier • MPs ask for a committee for the girl child; **21.** Sensex touches the 11,000 mark • India and Bangladesh agree to join hands to deal with terrorism • Supreme Court rules that non-consummation itself would mean cruelty to a woman and would be ground for divorce • Samajwadi Party member Swami Sakshi Maharaj expelled by Rajya Sabha, after his featuring in a sting operation by a TV channel on MPLADS • Uma Bharti to announce a new party by Apr. 30 • A Division Bench of Kerala High Court upholds the judgement that nuns, priests and sanyasins could be enrolled as lawyers provided they don't engage in any full time profession like teaching or nursing • BJP suspends 80 Uma Bharti loyalists • A.P. to develop a 'Golden Corridor' with the Westward Trunk Line covering five districts • Centre to give a bonus to wheat farmers in addition to the minimum support price • Former BCCI president Jagmohan Dalmiya is granted interim protection from arrest, by Bombay High Court, in a case of alleged misappropriation of Rs. 26 lakh for transactions during '96 World Cup; **22.** Government expects exports to touch \$110b. in 2005-06 • Delhi High Court issues bailable warrants against the nine persons acquitted in Jessica Lal murder case • AAI to strengthen airports infrastructure at Madurai, Coimbatore and Tiruchirapalli • ICICI Bank

sells its entire holding in South Indian Bank • Uproar in Parliament over ordinance the Government is preparing to promulgate to take some posts out of the purview of the 'office of profit' • Government to implement stringent regulation to curb illegal recruitment in the Gulf and other measures to stop ill-treatment of Indians • Sania Mirza wins WTA's New comer of the Year award • Amitabh Bachchan is back for film shooting, first time after his abdominal surgery • Budget session of Parliament ends abruptly; **23.** Sonia Gandhi resigns from the Lok Sabha and as chairperson of National Advisory Council, but says she will contest from Rae Bareilly again; BJP President says Mrs. Gandhi is 'running away' from the changes levelled against her; CPM wants new legislation to put certain offices held by MPs outside the purview of offices of profit • Liberhan Ayodhya Commission's term extended to June 30; **24.** CEC says President has forwarded to him complaints against 16 MPs including Sonia Gandhi and Somnath Chatterjee, seeking for their disqualification for holding an office of profit • Supreme Court rules that the breakaway BSP MLAs will continue as a separate group in the Assembly • Prime Minister flags off the first Amritsar-Nankana Sahib bus since 1947, linking two holiest Sikh shrines • Maoists storm a sub jail in R. Udayagiri in Orissa and free 40

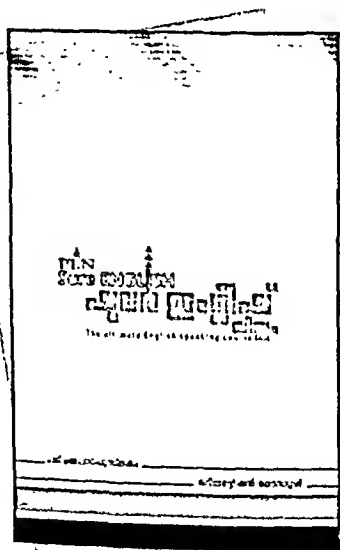
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prisoners • Congress workers from across the country pour into New Delhi to express support to Sonia Gandhi • Amid chaos, the Jharkhand Assembly passes the Disqualification Bill • Reversing its earlier decision, CPM Politburo lets Kerala leader V.S. Achutanandan to contest polls; **25.** Medha Patkar urges Prime Minister to reconsider decision on raising the height of Narmada dam • 13 villagers in Chhattisgarh killed by Naxals • Anil Ambani resigns from Rajya Sabha • Prince Charles and wife Camilla arrive on six-day visit • Bihar appoints yoga guru swami Ramdev as its brand ambassador; **26.** Prince Charles and wife Camilla arrive on six-day visit; **27.** Sensex closes at 11,079; Market capitalisation is at Rs. 29.5 trillion • Planning Commission asks RITES to study the four major mechanised modes of transport for it • India and GCC countries decide to accelerate finalisation of free trade area agreement • Jagmohan Dalmiya, former BCCI chief, questioned by Mumbai police's Economic Offences Wing in the case of misappropriation of funds • First Large Taxpayer Unit to be operational from July 1 • Infosys Technologies to set up its largest campus yet spread over 550 acres at Mamidipally, Hyderabad • India's Gagan Narang wins gold in 10 m. air rifle event at ISSF World Cup Shooting Championship at Guangzhou, China and be-

comes the first Indian to qualify for the Beijing Olympics • Satyam Computer Services stop conducting HIV tests on potential employees; **28.** An Indian Trade Centre to be established in UAE • All new entrants into Indian armed forces to undergo compulsory HIV test • Sonia Gandhi in Rae Bareilly, attacks opposition for finding fault with her • Public Health Foundation of India launched by Prime Minister; **29.** Partial solar eclipse • 7000 chickens culled in Madhya Pradesh • Low enriched uranium from Russia to fuel the first two reactors at TAPS (Tarapur) • In Islamabad, India and Pakistan agree on economic and commercial co-operation • Padma Awards to 53 recipients given by President in the second part of investiture ceremony; **30.** Rajinikanth's *Chandramukhi* sold for dubbing in German and Turkish languages • BITS-Pilani to set up a Rs.160 cr. campus in Hyderabad • Senior citizens can now transfer accounts under SCSS 2004 from one deposit office to another • Sensex crosses 11,300 • Four doctors of AIIMS, New Delhi arrested in connection with the alleged malpractice in the PG Medical Entrance Exam • UN's *Escap* says India will grow by 8 p.c. upto 2008, but oil prices remain a concern • Raymond poised to become the world's largest worsted suiting producer, following its new facility (Vapi)'s inauguration • Govt. doubles the finan-

cial powers of Finance and Defence Ministers • Foreign Secretary Shyam Saran in USA for talks on US-India nuclear deal • Ranbaxy, India's top drug maker, unveils its fourth European acquisition in nine days with the purchase of Belgian generic drug company Ethimed NV; **31.** Forex reserves touch \$ 148.662 b • Current account deficit narrows to \$3.8 b • Finance Ministry says STPI units are eligible for IT sops • Biman Bose to succeed Anil Biswas as West Bengal CPM Secretary • ONGC is at the top of 33 Indian companies which found a place on Forbes' list of top 2000 corporate titans in the world • India's external debt stood at \$119.2 b. in Dec.'05.

April

Film Icon Rajkumar Dead

1. Prime Minister rules out any possibility of a mid-term poll • Five BJP-ruled states - Chhattisgarh, Gujarat, Jharkhand, M.P. and Rajasthan - switch over to VAT • Gurbachan Jagat is the new UPSC Chairman • IIM-Ahmedabad raises its annual fee for the PG programme from Rs. 1.5B lakh to 1.77 lakh • Arundhati Roy joins Medha Patkar in sympathy; the latter on the fifth day of her fast at Jantar Mantar; **3.** A 284-point rise in Sensex takes market to a high of 11,564, the highest ever • According to consulting firm KPMG, India needs \$ 10 b. private investment in energy sector • Andhra chief minister



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says a separate Telengana state is unlikely • Infosys top official says Hyderabad has the best infrastructure for IT in India today; **4.** Jagmohan Dalmiya is interrogated by Economic Offences Wing of Mumbai police • Sensex reaches 11,710 • IIM-K hikes fee by 20-22% • India accounts for over 25 p.c. of maternal deaths worldwide, and Rajasthan has the highest rates (67 per lakh live births) • Singapore is considering developing a SEZ in India; **5.** Medha Patkar, on the 8th day of her fast, is arrested and moved to the hospital in Delhi • Centre declines to concede to the demands of striking SBI employees • Abdul Latheef Naushad, freed from prison in Saudi Arabia where the Sharia Court had ordered that his eye be gouged out for injuring a Saudi, returns to home in Kerala • Vijay Nambiar joins Kofi Annan's team of top advisers • Government proposes a cess on air travel so that the funds can be used for developing smaller airports • A student of Hyderabad's Indian School of Business is offered a salary of Rs. 1.04 cr. by an Indian IT company for an international position • Gagan Narang tops the world rankings in men's 10 m. air rifle category • RBI asks banks to help poultry units hit by bird flu • WTO D-G Pascal Lamy in India; **6.** L. K. Advani launches his Ram Rath Yatra at Rajkot • BJP President Rajnath Singh begins his 5-week Bharat Suraksha Yatra • Com-

munal clash kills 5 in Aligarh; **7.** Foreign Trade Policy Annual Supplement released, with \$120 b. as export target and sector-specific initiatives to make India a hub for gems and jewellery exports and a major refuelling stop for international flights • Sensex dives 365 points intraday, reportedly due to a 'rumour' • Forex reserves reach \$151.62b. • Finance Minister says rupee convertibility is unlikely before 2009 • Rajasthan passes a Bill prohibiting religious conversion 'by use of force, allurements or fraudulent means' • About 70 people die as a bus falls into the Chenab river in Doda, J&K • NCW calls for more stringent implementation of law against sex determination tests; **8.** Two lakh more chickens to be culled in Maharashtra • Aligarh continues to remain under curfew for the third day after the killing of six people • Kashmir's first women's magazine 'She' launched • Sonia Gandhi quits chairmanship of Rajiv Gandhi Foundation, Indira Gandhi Memorial Trust and Jawahar Bhavan Trust; **9.** Interpol brands Dawood Ibrahim as dangerous as Osama Bin Laden. He has 11 passports, including eight from India • UGC to fill up 120,000 vacant posts in universities soon, of which 50,000 are teaching posts • The 7-day SBI strike called off - fresh cut-off of basic for determining pension increased from Rs.8500 to Rs. 21,040 • Indira Vikas Patras are like cur-

rency notes, so can't be replaced if lost, rules Supreme Court; **10.** Actor Salman Khan sentenced to a five year jail term after a Jodhpur court held him guilty of killing a rare bull • India's oil import bill hits record high of \$43.8 b. in 2005-06 • About 50 people die in a fire in trade fair in Meerut • Criminal proceedings initiated against M.F. Husain in a Rajkot court stayed by Supreme Court • Supreme Court declines to modify sentence for Zahira Sheikh in Best Bakery case • Centre to introduce a package for preventing farmers' suicides in A.P., Maharashtra, Karnataka and Kerala; **11.** Sharad Yadav is elected national President of Janata Dal (United) defeating George Fernandes • Supreme Court directs demolition of all fish tanks in Killeru lake area of A.P.; **12.** Phalke Award winner Kannada film icon Rajkumar, 78, is dead • Sensex plunges 307 points • Bombay High Court lifts ban on dance bars • Orissa IPS officer's son Bitendra Mohanty gets 7-year R for raping a German schoolgirl • Government to review the decision to raise the height of Narmada dam; **13.** Department of post to invest Rs.10,000 cr. in stock market • Inflation 3.51 p.c. • Six killed, as violent rocks Bangalore - unruly mob attack buses and shops, following news of death of film icon Rajkumar; **14.** Grenade attack in a series of blasts kill five, injure 40 in Srinagar, twin b'



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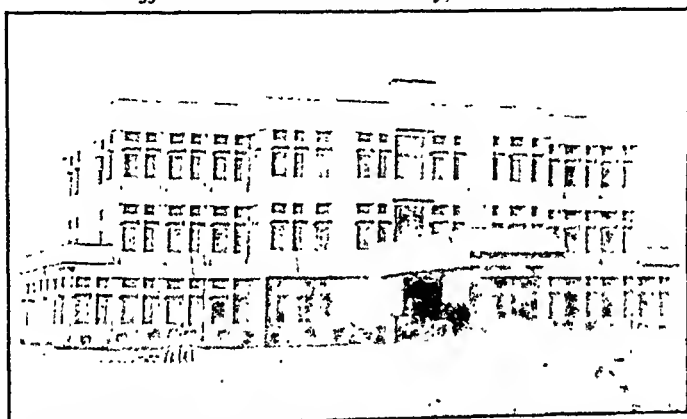
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otes, i.e. 94 per cent; **28.** Government considering allowing wheat import by private sector • Supreme Court says sales tax can't be imposed on lotteries as they don't come within the definition of goods • Telecom engineer K. Suryanarayana kidnapped by Talibans in Kandahar; **29.** Naxals kill 13 abducted villagers in Chhattisgarh • Taliban threatens to execute Suryanarayana if New Delhi does not pull out Indians in Afghanistan • Pramod Mahajan undergoes a surgery to wash the abdominal cavity • SBI raises Interest rates for home loans by 0.25-0.50 per cent; **30.** Uma Bharti launches her new party 'Bhartiya Janasakti'.

May

Karunanidhi is Tamil Nadu CM

1. 35 persons killed in two separate strikes by terrorists in J & K's Udhampur and Doda districts • Four killed in communal violence in Vadodara • IAF phases out MiG-25 aircraft • Pramod Mahajan develops acute respiratory problem • Engineer Suryanarayana held by Taliban killed, even before MEA team reached Kabul; **2.** Andhra Pradesh High Court stays SEBI order on Kavya Group, letting it continue normal market activities • India's LNG deal with Iran hits an impasse, as Iran wants changes in the contract • Bus falls from Thane bridge, killing 31 • Child prodigy

Buddhia Singh, 5, of Orissa covers 65 km in 7.02 hours; **3.** Third and final round of polling in Kerala and fourth phase in West Bengal • Army deployed in Vadodara, peace returns • 10 killed in J & K, six are militants • ADB to double its financial assistance to India to \$ 2.6 b. by 2008, from present level of \$1.3 b • Karnataka's IT exports, Rs. 40,081 cr. now, expected to hit Rs. 50,000 cr. in the current financial year • 39th annual meeting of ADB Governors opens at Hyderabad • Second round of talks by Prime Minister with Hurriyat leaders, in New Delhi • Supreme Court asks governments to take steps to achieve total prohibition of liquor; **4.** CBI conducts raids at 24 places against former Haryana Chief Minister O. P. Chautala, for amassing property worth over Rs. 1400 cr.; **5.** Hyundai Motor India has plans to make a 1.2 litre diesel compact car • Gold prices cross Rs. 10,000 per 10 gm mark • Supreme Court rules there won't be quota for all-India seats in PG medical admissions • Assocham says mutual fund industry, now worth Rs. 2 lakh cr. would be worth Rs. 4 lakh cr. by 2010 • Music composer Naushad Ali passes away; **6.** Dabhol power plant to step up production to 640 MW by May 15, from the current level of 300 MW; **7.** India works out a route bypassing Bangladesh for importing gas from Myanmar • Blistering heat wave in North

India, with mercury crossing 45°C in Delhi • APJ Abdul Kalam is voted the biggest icon in Tamil Nadu in a CNN-IBN online poll; **8.** Election in Tamil Nadu, West Bengal and Pondicherry • SEBI allows listed companies to raise money by privately placing securities with QIBs • Heat forces closure of Delhi schools • Medical report on child runner Buddhia Singh says long distance running is not good for him; **9.** ISRO and NASA sign a MoU for placing two US scientific instruments on board ISRO's lunar craft Chandrayaan-1 • Mona Pruthi tops in civil services examination • Police register an FIR against Union Health Minister Dr. Ambumani Ramadoss and Dr. S. Ramadoss for allegedly instigating the murder of an AIADMK man who recently defected from DMK; **10.** Petroleum Ministry recommends hike of Rs. 5 for petrol, diesel and kerosene and Rs. 50 for LPG; Left rejects the proposal • Maharashtra expects record sugar output of 69 lakh tonnes in '06 - '07 crushing season • Cauvery Tribunal drops its order to appoint an experts committee on crop pattern and water requirements • Delhi High Court bans interviews of children or parents for nursery admission • IITs to recruit teachers from EU countries • An ocean liner 'SS Norway' reported heading towards the Gujarat coast with suspected load of toxic substances; **11.**



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onia Gandhi wins Rae Bareilly Lok Sabha bypoll by a margin of 417,888 votes • Planning Commission recommends 15 more IITs; **12.** Pilotless target aircraft Lakshya testfired • Central Bank of India's business crosses Rs. 1 lakh crore • Industrial growth dips to 8 p.c. in '05-'06 as against 8.4 in '04-'05 • Infosys Technologies to hire 30 interns from 17 European technology and business schools; **13.** M. Karunanidhi assumes office as Tamil Nadu Chief Minister, the fifth time, Congress lends outside support to the DMK Ministry; **14.** Protests against OBC quota get stronger; demonstrations in Bangalore and Orissa; Delhi medicos begin hunger strike • Tarun Gogoi sworn in Chief Minister of Assam for another term • Srinagar-Leh road thrown open for the next six months; **15.** Another Black Monday for the stock market, with a crash of 463 points in sensex, as metal prices fall, FII's pull out funds from India, and market across the world suffer losses • Private doctors join the IMA-called nationwide strike, medical services crippled • Passports of defiant H.K. Dogra, the former High Commissioner to New Zealand, and his wife revoked; **16.** Ban on non-iodised salt for human consumption comes into effect • Supreme Court says commercial banks can cancel bad debts with RBI approval, and writing off NPAs doesn't mean mismanagement

• Best Bakery case: Zaheera's mother Sehrunissa gets three months • Ph.D, M. Phil. holders exempt from NET qualifications • Naxals kill 12 members of a marriage party in Gadchiroli in Maharashtra • Office of Profit Bill passed by Lok Sabha • Tamil Nadu Government says all qualified Hindus can become priests (archakas) in Hindu temples; **17.** Babulal Marandi, MP from Jharkhand, resigns from BJP • Committee to study the quota issue in professional colleges • Mukherjee Commission reports that Netaji Bose didn't die in a plane crash; Government disagrees • Information & Broadcasting Minister watches the film *The Da Vinci Code*; decision on release in India awaited • Recovery in global metal prices takes sensex up by 344 points; **18.** Government allows the screening of *The Da Vinci Code* with Adults Only certification and a disclaimer saying it was a work of fiction • Infosys to develop a training facility at Mysore to train around 9000 personnel at one place • Panicky sales on Indian stock market lead to Rs.225,000 cr. meltdown; Finance Minister blames it on faulty reporting on FIIs • Tata's Rs. 1 lakh car plant launched in West Bengal • ADAG bags Mumbai metro rail project; **19.** Reservation supporters in Pama clash with police • Pope asks India to allow conversion • Tax on interest on senior citizen postal savings scheme to be de-

ducted at source; **20.** FM rules out re-introduction of Capital Gains Tax on equity transaction • **32** killed as truck plunges into a ravine near Rajapur in Ratnagiri district • BJP and RSS take strong exception to Pope's comments on alleged religious intolerance in India; **21.** Militants carry out a suicide attack on a Youth Congress rally in Srinagar, killing 7 • Striking doctors told to vacate hostels • Tarapur N-power station's third unit goes critical; **22.** India witnesses the biggest crash in stock market - sensex falls by 1111.70 points, then recovers by 654, and closes with a loss of 457 points. FM assures that there is no liquidity crisis • Hurriyat not to attend the round table conference • Two members - Andre Beteille and P.B.Mehta resign from National Knowledge Commission in protest against Centre's reservation policy • Doctor's strike continues, as talks fail • Supreme Court seeks view of CEC on the demand of BJP-led opposition MPs for the ouster of Naveen Chawla from EC • CAG report says Delhi's Metro is suffering losses annually • Government says TAP gas pipeline project is not a substitute for IPI project and can only be an addition; **23.** MTNL drops tariff - Delhi-Mumbai call to cost only 40 p.per minute • Budget session of Parliament ends; **24.** Sensex sheds 250 points • Second round table on J&K opens in Srinagar • Government to raise

the number of seats in all educational institutions receiving Central aid by 54% • Postal Dept. is considering investment of Rs. 225 cr. in stock market • Subir Raha's term as ONGC chairman ends • Jaya Bachchan resigns as chairperson by GEAC; **26.** • Pondicherry's official name changed to Puducherry • Detailed survey of Sir Creek to begin in November • South-West monsoon reaches Kerala; **27.** Saina Nehwal becomes the first Indian woman to reach the final in a four-star event, when she reaches the badminton final of the Philippines Open • Centre orders increase in seats in medical institutions • In Bangalore, child marathoner Budhia Singh is stopped by police from undertaking a marathon race; **28.** Bob Houghton appointed chief coach of Indian football team; **29.** India and China sign the first-ever MoU on military ties • A 13-member Oversight Committee under Veerappa Moily set up to monitor implementation of OBC reservation • Ailing Kerala MLA Mathai Chacko sworn in at a private hospital in Kerala by Speaker • Rupee loses 23 paise to end at 46.09; **30.** Arundhati Roy nominated for Spanish Prince of Asturias Prize for 2006; **31.** As FII's continue selling spree, Sensex drops 388 points • Infosys Technologies to increase professionals in China to 5500 in five years, to have SEZs in Mysore and Thiru-

vananthapuram, and additional facilities in Mangalore, Pune, Chandigarh • GDP growth in 2005-06 is 8.4 pc; Recovery in agriculture remarkable • Doctors call off their 19-day-old strike • Screening of 'Da Vinci Code' suspended in Tamil Nadu • • BrahMos test-fired successfully for the 12th time.

June

Shashi Tharoor is India's UNSG Candidate

1. Terror strike at RS headquarters in Nagpur foiled; three terrorists (suspected LeT) shot dead; • NSSO survey puts national average of disabled persons at 105 per 100,000, with Kerala (272) topping the states in mental illness • A Krishna temple to come up in Moscow • Wullar lake tragedy toll is 21 children and one teacher • Jaya Bachchan again files her nomination papers for the Rajya Sabha • AP and Meghalaya ban screening of 'The Da Vinci Code'; **2.** US slaps sanction on Dawood Ibrahim • Amitabh Bachchan and wife Jaya are worth Rs.227 cr. • New four-page I-T returns form asks for income and expenditure of assessee and his bank and cash balances; **4.** The air-version of BrahMos missile to be ready in the next few years; **5.** V. Kurien resigns as chairman of IRMA • Petrol price is up by Rs. 4, and diesel by Rs. 2 • Goa bans 'The Da Vinci Code' • N. Gopalaswami to succeed B.B.

Tandon as CEC; **6.** IBM to triple its investment in India over three years to \$6 b • Banks in Kerala to consider writing off agricultural loans of upto Rs. 1 lakh taken by farmers who committed suicide • Work on 8-lane ring road encircling Hyderabad and Secunderabad begins • India is the top newspaper 'power', with 78.7 m. copies sold daily • Manipur Assembly passes again the Office of Profit Bill in its original form after Governor returned it a week before • Emigration clearance not required for those with a basic qualification of matriculation, government clarifies; Number of countries requiring EC brought down to 17 from 138; **7.** Central team in Kerala to study suicides by farmers; **8.** APJ Abdul Kalam makes a sortie in a supersonic fighter jet, Su-30MKI - the first President to do so; **10.** National heritage status given to Dandi Yatra route • Women's fashion magazine 'Marie Claire' comes to India; **11.** Army is ready to adopt marathon kid Budhia Singh • Heavy snowfall suspends Amamath Yatra • Public telephones and FM radio to be installed in Mumbai buses • Prithvi missile test-fired • Militants blow up railway tracks in Sivasagar district • Centre approaches ICAO for clearance to a second airport at Navi Mumbai • NSG empowered to commandeer any available aircraft for launching 'hot pursuit' of hijackers; **12.** Government

has plans to introduce e-passports by 2013 • An Assocham study says manufacturing segments will create 25 m. new jobs in India • IT department asks Jaya Bachchan to file returns for 12 years; **13.** Bid on minister M.K. Stalin's life in Madurai foiled • Security beefed up as intelligence reports put Taj Mahal on the hit-list of terror groups; **14.** Floods kill B in Assam • 3-day talks between India and US end on a positive note • Planning Commission sets B.5 percent growth target for 11th Five Year Plan • Union Health Minister asks celebrities not to promote cold drinks and fast food • Government clarifies that the Senior Citizen Savings Scheme is taxable • Sensex closes below 9000 • Indian population to touch 1.4 b. by 2026 • Commerce Minister moots a new department for plantation; **15.** Shashi Tharoor nominated for UN Secretary General's post • Sensex records the highest single-session gain of 616 points • R.S.Gavai appointed Bihar Governor • Over 4.5 lakh people in 74B villages affected by Assam floods • Industrialist Rahul Bajaj elected to Rajya Sabha; **16.** Non-oil trade between India and UAE could cross \$25 b. by 2010, says FICCI chief • The Rs.7986 cr. Hyderabad Metro to get Central funding • Centre raises mid-day meal aid to States from Re.1 to Rs.1.50 a child • 9.2 km stretch of Bangalore-Mysore Infrastructure Corridor Project in-

augurated; **17.** All foreign luxury cars and SUVs imported under EPCG scheme to sport a yellow number plate • A former Intelligence official J.K. Sinha says India can produce 50 nuclear warheads a year; **18.** 24 passengers killed as bus falls into a gorge from Jammu Srinagar NH1A • The 3rd unit of TAPP to be ready six months ahead of schedule; it will increase nuclear power generation by one-sixth • The aircraft carrier Gorshkov to be delivered to Indian Navy in autumn 2008; **19.** Shashi Tharoor meets Prime Minister Manmohan Singh; **20.** Two former J&K ministers- G.A. Mir and R. Mattoo - arrested in connection with the sex racket case • India and China to meet on June 26 & 27 to arrive at a 'package settlement' of the boundary question • Seven villages in Dantewada, Chhattisgarh killed by Naxalites • Fresh probe into Kanishka bombing of 1985 by judicial commission begins; **21.** 16 States join the Centre's New Pension Scheme • Reliance Industries to invest Rs.4000 cr.in West Bengal • Lightning kills 69 people across Maharashtra in the past few days; **22.** Government clears the sale of 10% equity stake in NALCO and Neyveli Lignite Corporation • Government stops export of pulses to control prices; **23.** Mittal Steel nearing Arcelor takeover • CBI conducts nation-wide raids at 19 places in connection with

the enquiry into the Navy war room leak case • Indo-Pak talk on India's plans to build a barrage on J&K's Wullar lake • Japan lifts two-decade old ban on import of Indian mangoes • Protest by people from 400 villages affected by six dams being built in Narmada valley, in Bhopal • **27.** Reliance Industries to set up Reliance Retail Ltd. with an investment of Rs.10,000 cr. over time; **28.** LTTE denies it has owned responsibility for Rajiv Gandhi assassination • BrahMos, the supersonic cruise missile, is inducted into the Navy • Post Offices may soon be selling railway tickets; **29.** S.Y. Quraishi is made Election Commissioner • Bust of Gandhiji unveiled in Parliament building in Berlin • Army understood to be against permanent commission for women; **30.** Pakistan releases visa regime for Indian nationals.

July

Nathula Pass Opened

1. Prime Minister announces Rs. 3750 cr. relief package for six Vidarbha districts; **2.** Kerala governor gives his assent to professional Colleges Bill; Management to go to court against Bill; **3.** Heavy rains lash Mumbai for the third day • V.K. Shunglu Overnight Group of Narmada oustee rehabilitation submitted • Home Minister considering a temporary bullet proof steel structure in Ayodhya • First-ever agreement to regularise bilateral exchanges signed

by Parliament of India and China • Spanish Prime Minister Zapatero in New Delhi • Government cuts duties on SAFTA imports; 4. HAL puts production of Sukhoi - 30MKI in top gear; 5. Rain-related deaths in Maharashtra rise to 28 • AIIMS Institute Body recommends dismissal of Director P. Venugopal for violation of Rule 9 of the Conduct Rules; Doctors protest • Shahi Imam of Delhi Jama Masjid forms new party, U.P. United Democratic Front; 6. Nathula Pass opens after 44 years enabling Indian and Chinese traders to cross the border, 29 commodities to be exported to China, 15 to be imported • Investment of Rs. 320,000 cr. in highways, ports and airports envisaged in the next six years • Rain havoc toll in Kerala is 109 • Supreme Court refuses to lift the ban on SIMI • 8 new districts being created in JK; 7. Lakshmi Mittal to set up a 12 mt, Rs.40,000 cr. steel plant in Orissa • BSE to divest 51 per cent equity, proposes IPO • Government to declare 500 MTs as Centres of Excellence • ONGC-Mittal combine is looking at buying oil and gas properties in 21 countries • Inflation falls to 4.84 p.c. • Delhi High Court stays ATMs recommendation to terminate the services of Director P. Venugopal's services. • Centre accepts site identified by Mayana Govt for setting up a nuclear plant • SC says interstate marriages are to be en-

couraged • Centre's Rs.5,000 cr. package for T.S.P. disaster to prevent farmer suicides • SC issues notice to NSA for alleged anti-national activities with the aid of foreign organisations • Uter population in Gr is 355 • CBSE proposes health clubs in schools; 9. Intermediate range ballistic missile Agni - III test-fired, but fails in its maiden flight; 10. GSLV-F02 carrying INSAT-4C communication satellite crashes into Bay of Bengal • Prime Minister Manmohan Singh doesn't favour stopping construction work on Narmada dam • Payaz Ahmad Lone masterminded behind grenade attacks on Sakina Hazro killed; 11. Over 170 killed and 500 injured in the seven serial blasts that rock stations dotting the Western Railway service in Mumbai, between 6 and 6.30 p.m. • It is revealed that the GSLV launch was not insured • India plans to buy 8 Mi-17 copters from Russia; 12. India describes as 'appalling' remarks made by Pak Finance Minister Kasuri that draw a link between Mumbai attack and non-resolution of Indo-Pak disputes • Mumbai blast death toll is 136; Life's back to normal; BSE surges up by 375 • National Statistical Commission headed by C. Rangarajan begins work • Sonia 12. Centring commission by A.P. J. Abdul Kalam in progress in Mumbai • Delhi to build road high-way • 13.

14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 841. 842. 843. 844. 845. 846. 847. 848. 849. 850. 851. 852. 853. 854. 855. 856. 857. 858. 859. 860. 861. 862. 863. 864. 865. 866. 867. 868. 869. 870. 871. 872. 873. 874. 875. 876. 877. 878. 879. 880. 881. 882. 883. 884. 885. 886. 887. 888. 889. 890. 891. 892. 893. 894. 895. 896. 897. 898. 899. 900. 901. 902. 903. 904. 905. 906. 907. 908. 909. 910. 911. 912. 913. 914. 915. 916. 917. 918. 919. 920. 921. 922. 923. 924. 925. 926. 927. 928. 929. 930. 931. 932. 933. 934. 935. 936. 937. 938. 939. 940. 941. 942. 943. 944. 945. 946. 947. 948. 949. 950. 951. 952. 953. 954. 955. 956. 957. 958. 959. 960. 961. 962. 963. 964. 965. 966. 967. 968. 969. 970. 971. 972. 973. 974. 975. 976. 977. 978. 979. 980. 981. 982. 983. 984. 985. 986. 987. 988. 989. 990. 991. 992. 993. 994. 995. 996. 997. 998. 999. 1000.

Bachchan raises 26,000 pounds from UK for victims of Mumbai blasts • Symbiosis, Pune plans a diploma course in chess • Syed Ali Shah Geelani placed under house arrest in Srinagar • Cabinet rejects President Kalam's call for reconsideration of the Office-of-Profit Bill; **23.** IFFCO to set up a gas-based power plant at Kalol, Gujarat • Tamil Nadu to shift to VAT from January; **24.** Interpol in Nairobi says the man arrested on July 21 and suspected to be an LeT man A.K.'Tunda' was a British national of Nigerian parents; **25.** RBI hikes its short-term lending rates for the second time in two months - reverse repo rate is 6 p.c. and repo rate is 7 p.c. • Air Deccan overtakes Indian to become the second largest airline in India in terms of market share; **26.** Centre rejects Reliance Industries' proposal to sell natural gas to Anil Ambani's RNRL at a price far below the current market price • The next launch of GSLV-F02 to take place within one year • Six AIIMS-like medical super speciality hospitals to be set up in 6 states in 2½ years • Two soldiers in Kashmir picked up for possible links with LeT; **27.** Supreme Court discusses Kerala Govt's petition seeking a review of its verdict allowing the raising of the water level in Mullaperiyar dam from 136' to 142' • RBI raises the ceiling on investments that can be made by domestic mutual funds in overseas markets; **28.** SEBI lifts

new demat account ban on IDBI Bank, ING Vysya Bank and IL & FS • Microsoft India launches a Rural Innovation Fund in partnership with IDRC • Bill to rename Pondicherry as Puducherry introduced in Rajya Sabha • Govt admits fall in wheat production - only 9.2 million tonnes against the target of 16 mt; **29.** National Security Adviser says there is strong evidence of Pakistans' role in cross-border terrorism; **30.** 25,000 people evacuated from low-lying areas in Gujarat • Income Tax returns being received by selected Post Offices • Tehri hydroelectric plant is operational • Evacuation of 70,000 people threatened by floodwaters is on; **31.** A Forbes survey says India is a better place to invest than China • Scheme in the offing for investors to park upto Rs. 1 lakh in fixed deposit of commercial banks and get tax benefit.

August

Pankaj Advani

1. Banks and housing finance companies hike lending rates by 25-50 basis points • Nine-year-old ceasefire agreement between Government and National Socialist Council of Nagaland extended by one more year; **2.** German software major SAP plans to invest \$1 b. in India over five years • A parliamentary committee favours a Legislature Assembly

for A&N Islands • UP to set up a Tiger Society • Cauvery Tribunal gets 6-month extension; **3.** Justice R.S. Pathak Inquiry Authority finds that former Foreign Minister K. Natwar Singh and his son Jagat Singh misused their positions in getting contracts in oil-for-food scam • Annual inflow of FDI into India from US to increase to \$1 b. by 2010; **4.** Indian Railways and SBI sign MoU for installing ATMs at 681 railway stations • Furore in Parliament over 'leak' in the media of R.S. Pathak report; **5.** Floods in A.P. and Orissa kill 85 • Pakistan expels Indian diplomat Deepak Kaul alleging he was 'caught' red-handed' indulging in anti-Pakistan activities; **6.** Natwar Singh gives privilege notice against Prime Minister Manmohan Singh on the alleged leak of Pathak report • India-Pakistan peace conference scheduled to begin in Laho put off; **7.** Ruckus in parliament over Pathak report • Chhat sgarh bans sale of cola; I Sensex crosses 11,000 ma • Tapi river overflows, flood cause havoc in the industrial belt of Hazira in Gujarat; **8.** Gujarat asks for Rs.2000 cr. for interim flood relief • Kerala Government bans production and sale of Coke and Pepsi • **9.** persons marooned in a ONGC gas plant at Hazira rescued; **10.** Rajya Sabha Chairman rejects Natwar Singh's notice of breach of privilege of the House against the office of

by Parliament of India and China • Spanish Prime Minister Zapatero in New Delhi • Government cuts duties on SAFTA imports; **4.** HAL puts production of Sukhoi - 30MK1 in top gear; **5.** Rain-related deaths in Maharashtra rise to 28 • AIIMS' Institute Body recommends dismissal of Director P. Venugopal for violation of Rule 9 of the Conduct Rules; Doctors protest • Shahi Imam of Delhi Jama Masjid forms new party, U.P. United Democratic Front; **6.** Nathula Pass opens after 44 years enabling Indian and Chinese traders to cross the border. 29 commodities to be exported to China, 15 to be imported • Investment of Rs. 320,000 cr. in highways, ports and airports envisaged in the next six years • Rain havoc toll in Kerala is 109 • Supreme Court refuses to lift the ban on AI • **8.** new districts being created in JK; **7.** Lakshmi Mittal to set up a 12 mt. Rs.40,000 cr. steel plant in Orissa • BSE to divest 51 per cent equity, proposes IPO • Government to declare 500 MTs as Centres of Excellence • ONGC-Mittal combine is looking at buying oil and gas properties in 21 countries • Inflation falls to 4.84 p.c. • Delhi High Court stays AIIMS recommendation to terminate the services of Director P. Venugopal's services. • Centre accepts site identified by Orissa Govt. for setting up a nuclear plant • SC says inter-caste marriages are to be encouraged • Centre's Rs.15,000 cr. package for 16 A.P. districts to prevent farmer suicides • SC issues notice to NBA for alleged anti-national activities with the aid of foreign organisations • Lion population in Gir is 359 • CBSE proposes health clubs in schools; **9.** Intermediate range ballistic missile Agni - III testfired, but fails in its maiden flight; **10.** GSLV-FO2 carrying INSAT-4C communication satellite crashes into Bay of Bengal • Prime Minister Manmohan Singh doesn't favour stopping construction work on Narmada dam • Reyaz Ahmad Lone, mastermind behind grenade attacks on Sakina Ittoo killed; **11.** Over 170 killed and 500 injured in the seven serial blasts that rock stations dotting the Western Railway service in Mumbai, between 6 and 6.30 p.m. • It is revealed that the GSLV launch was not insured • India plans to buy 8 Mi-17 copters from Russia; **12.** India describes as 'appalling' remarks made by Pak Finance Minister Kasuri that drew a link between Mumbai attacks and non-resolution of Indo-Pak disputes • Mumbai blast death toll is 186; Life's back to normal; BSE sensex up by 315 • National Statistical Commission headed by Suresh D. Tendulkar begins operations; **13.** Combining operations by Anti-Terrorist squad in progress in Mumbai • Delhi police to install high-tech CCTV cameras in Rashtrapathi Bhavan; **14.** Forex reserves touch \$163. 260 b. • Indian post, in partnership with Dupont, launches waterproof and tear resistant envelope, right in time for the festival Raksha Bandhan. India is ranked 11th in global car output for 2005 by OICA; **15.** Farmer toll in Vidarbha reaches 650 with fresh suicide deaths; **16.** 35 farmers from Wadhona village in Amravathi district, alleging official apathy, seek permission from President to go for euthanasia • IFFCO and an Egyptian company acquire 1000 acres in Egypt to set up \$325 m. phosphoric acid plant • 65 terror modules busted in India in the last seven months; **17.** Centre to give Rs. 5000 cr. to develop NH17 in Kerala; **18.** Four naval ships being sent to Lebanon for evacuating Indians from the country, where Hizbolah militant groups are under Israeli attack; **19.** Rupee hits three year low of 46.99, as soaring crude oil price causes concern • TCS to recruit 4000 foreign nationals; **20.** Decision to appoint the Sixth Pay Commission is cleared by cabinet • Pak President Musharraf asks India to provide evidence of Islamabad's alleged involvement in Mumbai bomb blasts; **21.** Reliance ADA Group to invest over Rs.61,500 cr. in Orissa to set up an institute of higher learning in IT • A multi-disciplinary university to be set up in Puri (Orissa) by Vedanta Resources; **22.** Anthrax kills two cows in Kerala • Amitabh

50th year, has a total investment of Rs. 465,100 cr.; market pie rises to 77.5 per cent •SCI to acquire 10 offshore vessels in three years •Vice Admiral Suresh Mehta is next Naval Chief •Floods in M.P. and Orissa •Karnataka makes singing of Vande Mataram a must on Sept. 7 •Tripura, with 80.14% literacy, is 8th in the country •Telugu director Kalyana Chakravarthy to make a film on Vande Mataram in 10 languages •Stock market closes in on 12000; **2.** Sixth Pay Commission constituted with Justice B.N. Srikrishna as chairman •RBI places United Western Bank under moratorium till Dec. 1 •Ganesh Bank of Kurundwad amalgamated with Federal Bank; **3.** Flood situation worsens in J&K; **4.** Millions hit by flood in Orissa; Relief hampered by rain •Kerala minister P.J. Joseph resigns, following a reported misbehaviour to a copassenger in an aircraft; **5.** Sharad Pawar's daughter Supriya Sule is candidate for RS elections •Prime Minister warns State Chief Ministers of terrorist outfits in the country •Congress expels Jagat Singh, Natwar Singh's son; **6.** Opposition from Sikh and Muslim groups to making singing of Vande Mataram mandatory; **7.** Vande Mataram sung in offices and schools of several states •Automobile industry seeks tax holiday for investments exceeding Rs.500 cr.; **8.** Tamil

Nadu launches Coimbatore as the Model Tier II City •Huge haul of rocket launchers and shells in A.P. •Ethanol-blended petrol to be marketed all over the country from Nov. 1; **9.** Rubber prices dip to Rs.77 for ungraded •Prime Minister leaves on 9-day visit to Latin America to participate in NAM summit in Cuba and first IBSA summit •Supriya Sule elected to RS from Maharashtra •Seven killed in J&K violence •DIC(K) splits, with T.M. Jacob and Johnny Nellore quitting; **10.** Quake (4.0) rocks Meghalaya •Gandhi's Satyagraha centenary •Police says the Malegaon bombs were made of a deadly mixture of RDX, ammonium nitrate and petroleum •Vandalism at Lucknow's Loreto Convent School; **11.** National Commodity and Derivatives Exchange (NCDEX) emerges world's third largest agricultural exchange •VW to locate its Indian greenfield car manufacturing plant at Chakan, near Pune •India's external debt is \$125.2 b. •South African Deputy President Ms. Phumzile in India •Passenger car sales rise to 83,844 units in August from 72,272 in the same month in 2005 •Taslima Nasreen, Bangladeshi writer, asks for Indian citizenship or permanent resident status; **12.** Four of the Memon family members held guilty in the 1993 Mumbai blasts cases; **13.** Vidarbha farmer suicide toll

reaches 852 •Elephant dies of anthrax in Thekkady, Kerala •Geelani re-elected chairman of the hardline factions of Humiyat; **14.** Jharkhand's Arjun Munda NDA government falls; UPA government with Independent Madhu Koda likely •TADA court holds Shoib Ghansar guilty of planting a bomb in Mumbai's Zaveri Bazaar in 1993 •Prime Minister's visit to Brazil for IBSA summit ends; **15.** Prime Minister, on his way to Havana, says NAM is as relevant today as during the Cold War •Separatists S.A.S Geelani and S.A.Shah are placed under house arrest •CBI presses for death penalty for the three Memon brothers convicted in Mumbai blasts case; **16.** Prime Minister Manmohan Singh and Pakistani President Musharraf hold talks in Havana and decide on joint mechanism to counter terror •India-Australia cricket match in Chennai abandoned •RJD leader Ramdhari Singh killed in Buxar •Manmohan Singh asks NAM leaders in Havana to unitedly fight terrorism •Prime Minister Manmohan Singh visits President of Cuba in Havana; **17.** A UP minister, Yuqoob Qureshi, fined Rs.14,000 for ticketless travel; **18.** Railway Minister Lalu Prasad addresses IIM-A students on the turnaround of the railways into the second largest profit-earning state-run unit •Indian crude basket touches \$59.92, the year's lowest; **19.**

Gujarat police bust a terrorist module; four Lashkar 'sleeper cell' members arrested; 297 pofo cases reported this year • India is yaws-free, Ministry of Health says • HAL to build jet fighter engines; 20. 'Delhi Bandh', against a sealing drive by MCD, turns violent, killing three • Jharkhand Chief Minister Madhu Koda wins the vote of confidence • Rs.17,000 - crore rehabilitation package for farmers in A.P., Karnataka, Kerala and Maharashtra with high suicide rates being considered • Cyclonic storm kills 15 in West Bengal; 21. President Kalam attends silver jubilee of Sri Chithra Tirunal Institute of Medical Sciences, Trivandrum • An American Express White Paper says there are 711,000 individuals with liquid cash of over \$100,000 in India, and new number will grow to 1.1 m. by 2009 • Government to set up one lakh rural computer kiosks • Sensex surges to 12,274.27 • Gujarat Chief Minister Keshubhai Patel's wife killed in a fire in Ahmedabad • Sealing and demolition suspended in Delhi till Sept. 25 • CPI wants setting up of SEZs stopped • A Kerala Sastha Sahitya Parishad study says Rs 6787 cr. is spent on weddings in the state annually; and Rs. 2800 cr. on medical treatment • Chikungunya kills 25 people in Kerala's Alappuzha district; 22. Kerala High Court orders State Govt. ban on the manufacture and sale of Coke and Pepsi • Government plans to add 100 food testing labs to the existing 31; 23. Telangana Rashtra Samiti withdraws support to UPA coalition government, on the Telangana state issue • Government to set up drug banks in the 600 districts in public-private partnership • PHD CC study finds northern States (44% of India's geographical area) contributes only 30 % to industrial output • Deepa Mehta's 'Water' nominated as Canada's entry for 2007 Oscar in foreign film category; 24. 8-year old Mrutunjaya Mandal, runs a marathon and collapses • President Musharraf puts forward his Kashmir solution in his book In the Line of Fire • Education Ministry permits deemed, varnates to use 'university' in their names • UPA chairman Mrs. Gandhi says no Deputy Prime Minister is to be appointed; 25. Mumbai multiple PAN card holders to surrender over 3 lakh duplicate cards by Dec.31 • Eight farmers in Vidarbha commit suicide; 26. Mohammed Afzal, the mastermind behind the Parliament attack of 2001, to be executed on Oct. 20 • First case of polio in three years detected in Mumbai; 27. Pakistan allows imports of more goods from India • Speed Post Passport Service expanded to 873 post offices, in addition to the present 220 • Nirupama Rao is Indian ambassador in China • Kerala Government recommends CBI probe into Marad riots • Oversight Committee recommends a review of OBC reservation regime after five years and again at the end of a decade of implementation • Lata Mangeshkar is 77 • President Kalam's website has 2.4 m. hits on Sept.12, a record • The Centaur bomb planter Mushtaq Tarani, in jail since 1993 is charged for terrorism, faces life imprisonment • 28. A 50,000 - tonne Russian wheat consignment rejected by STC because of high percentage of extraneous matter • Clearance for 31 more SEZs, including the Rs.53,000 crore investment in Orissa by S. Korean steel company Posco; 29. Growth in manufacturing sector takes GDP growth to 8.9 per cent • Cabinet clears a Rs.16978.69 cr. rehabilitation package for farmers in suicide-prone districts; 30. Kerala's Palakkad is the first 'total banking' district in India with every household having a bank account.

October

Booker Prize for Kiran Desai

1. Pondicherry becomes 'Puducherry' • Dengue deaths in Delhi • Shiv Shankar Menon assumes office as Foreign Secretary; 2. Anil Ambani is the third richest person in India, as ADAG market capitalisation touches Rs.100,00 cr. • India and South Africa to treble bilateral trade to \$10 bn. by 2010

•Protests over death for Afzal Guru continue in Srinagar •Supreme Court says speedy trial is a constitutional right •Prime Minister Manmohan Singh and Thabo Mbeki launch Satyagraha Centenary celebration in South Africa •35 pilgrims drowned in Madhya Pradesh; 3. LIC's record in first premium income- 150 p.c. increase to Rs. 12,390 cr. over last year •Kerala where 71 deaths from Chikungunya are reported, seeks help from Centre and WHO •India's nominee Shashi Tharoor announces withdrawal from the race for UN SG's post, after South Korea's Ban Ki-Moon emerges a clear winner in the fourth straw poll •India emerges as the second largest global cotton producer •Mahesh Bhupathi says he won't play for India •Prime Minister concludes 4-day South African visit; 4. RBI tells banks to issue passbooks to SB account holders •Fidayeen attack on CRPF headquarters in Srinagar, three policemen killed •WHO experts arrive in Kerala to study chikungunya deaths •'Garib Rath', the poor man's AC train flagged off at Saharsa, Bihar; 5. Foundation laid for Western Railway's dedicated freight corridor project •Family members of Mohd. Afzal, who is facing death penalty, meet President Abdul Kalam; 6. Delay likely in the passage of legislation in US Congress on civilian

nuclear cooperation with India •CII-Infosys to launch a programme 'Toward 100 Indian Billion \$ MNCs'; 7. 13 lakh people affected by Chikungunya in the north Indian states; 9. Govt. to hold talks with NSCN(IM) in Amsterdam •More dengue cases reported in Delhi; 10.CBI registers a FIR against former Defence Minister George Fernandes, in the Israeli Barak missile case; 11. Kiran Desai, 35, wins Booker Prize for *The Inheritance of Loss* - the youngest woman to claim the Rs.42 lakh prize •SC holds that it has the power to review the pardon exercised by President or Governor to a convict; 12. South African cricketer H. Gibbs says in New Delhi South African captain H. Cronje offered him money twice to under perform in ODIs •BSNL cuts STD rates to Re. 1 for fixed line; 13. Parties approve delimitation for 2009 elections •IITs placed No.3 in global rankings of world's 100 best technology universities; 14. Hundreds of Dalits embrace Buddhism and Christianity at a mass conversion programme in Nagpur •Jabbar Patel's film 'Dr. Babasaheb Ambedkar' to be made in nine languages •Mayawati says she wants to be the first dalit Prime Minister of India; 15.Air India flight stranded at Heathrow airport for two days arrives in New Delhi with 300 passengers

•Mukesh Ambani is the richest in India, a position held so far by Azim Premji; 16. Sensex gains 192 to reach 12,928 •Mayawati converts to Buddhism; 17. Rupee at 5-month high of 45.27 per dollar •Dabhol power plant to restart by Nov. 15 •Planning Commission targets 9% growth in 11th Plan •Mobile users in India rise to 129.53 m; 19. Veteran actress Srividya, 53, dies •35 feared dead in bus plunge near Rewa •SC holds that the creamy India layer should be excluded from reservations for SC & ST in Government jobs; 20. Tata Steel announces the largest Indian takeover of a foreign company with a \$4.3 b. for Corus, the Anglo- Dutch firm; 21. Delhi leads metros in delivering RTI Act •An army personnel arrested in Delhi while allegedly handing over sensitive papers to a driver of Pak High Commissioner; 22. National Security Adviser says India will share intelligence if Pakistan cooperates •Arun Nayar to wed Liz Hurley at Udaipur Palace in Feb'. 07 •Gas leak in Kota kills one, 70 are ill •Farooq Abdullah wants Afzal to be given opportunity to defend himself •Railways to phase out 10,000 AC coaches •Navy to restore Sea Kings; 24. Pranab Mukherjee sworn in External Affairs Minister and A.K. Antony Defence Minister. ■

INFORMATION TECHNOLOGY

PART

03

Knowledge Management Paradigm

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The best and the very well known model of Knowledge Management (KM) is the human brain. The five senses touch, taste, vision, hearing and smell, collect the data. The brain computes the data, converts it into information and stores it in the memory. One part in the left half of the brain interprets the data while the right half applies logic and starts a thought process. Somewhere else in the brain inquisitiveness pops up its head and investigation starts. The intuition comes to the aid from somewhere. Feedback is collected from the environment. Finally, a concoction of information, intelligence, intuition, investigation, and inquisitiveness is formed and knowledge is formed. Intelligent and gainful management and utilization of knowledge brings in wisdom, which results into prosperity, well being and creativity to the individual as well as to the society. The technological revolution that is continuously taking place in the world over and the feasibility of collecting enormous amount of data, getting it processed into information, storing the information and converting it into knowledge by of the computer technology has made it possible to have repository of fathomless and limitless expanse of ocean of information and knowledge. Consequently, the management of knowledge using tools, techniques and processes has become a lifeline for the citizens not only for keeping themselves afloat on the ocean (of knowledge) but also for navigating them to their cherished destination.

Knowledge by itself is an abstract perception. It takes different forms and content de-

pending upon the context of the situation one is dealing with. There is explicit knowledge in the head of an individual about the phenomena, events and the physical entities one experiences or comes across. In the context of an organization, its 'knowledge' is its 'know-how', its proficiency, its capability to take important strategic decisions and above all, its human intellectual potential. This knowledge results in assets like Intellectual Property Rights, patents, trademarks, business plans, intuitive predictions about futures etc. People create synergy by participating in brainstorming sessions and information exchange processes and apply tacit knowledge to find solutions to the encountered problems as well as to develop new techniques, know-how, processes and products.

Knowledge management basically comprises the following: 1) Knowledge creation - generate data, process into information, learn, research, innovate and collate the distributed knowledge. 2) Capture knowledge from the memories, personal notes, scratch pads, diaries of individuals, documents, and computer data bases, often geographically distributed all over the globe. 3) Store the knowledge in knowledge repositories like web servers, databases, knowledge warehouses, knowledge portals and digital libraries. 4) Structure and transform the information and knowledge into well organized format such that it is conveniently, easily and quickly traceable and accessible. 5) Share the available knowledge with people through knowledge fusion into the society using the ICT and Internet tools. 6)

Manage the knowledge through the smart minds of motivated, committed and knowledgeable individuals. In other words, Knowledge Management system can be defined as a distributed hypermedia system for managing knowledge for individuals as well as for organizations for supporting creation, capture, storage and dissemination of expertise and knowledge. The Internet has provided a mighty tool for KM. Internet comprises a distributed hypermedia system using general purpose client server technology and diversity of knowledge sources and computing resources. Knowledge seekers - all of them often located at geographically distributed places - log on to the Internet and get the information on their computer at any time of day or night, without any time restriction. This has become a valuable asset for Intellectuals, researchers and students. However, it is not without problems. There is always a possibility that the user can get totally lost, if not drowned in the vast ocean of information. Those of you who have searched the Internet for any specific topic of interest, would have faced the fact that the Internet search engine, like Google for example, presents before you, within seconds, some lakhs of references and you get totally frustrated and impatient because you can't choose the correct hyperlink, which will take you to the desired information. The whole of the ocean of information is available to you but what you need is a relevant drop from this ocean which contains exactly what you are looking for at the specific time for a specific purpose. The KM, in this case, is to structure, segregate and catalogue this information and provide the tools and techniques to enable you to navigate on the ocean such that you reach your destination - a small drop containing your information, which might be located in some corner somewhere in the vast ocean. Large number of software tools are available which provide access to the knowledge portals and digital

libraries and present the data to the user in value added format using multimedia and virtual reality systems and various tools and techniques like Graphical User Interface (GUI), animation and 3D virtual projections.

Knowledge-based Industry

The major assets of a KB industry are in the form of information and knowledge and the intellectual property is the capital. Synergy of the knowledge assets of the individual employee, company strategic planning capabilities, knowledge-based products, processes and services, and interdependencies and interactions between the various stakeholders and disciplines have turned the industry of the modern society into knowledge-based industry. Technology is generating better performance and achieving breakthrough in business operations, in productivity improvement and in cost reductions when empowered with knowledge base and wisdom. Ongoing learning and unlearning, and adaptation of knowledge is giving the industry competitive edge. Employees sharing their knowledge (residing in their brains and computers) can potentially lead to more effective problem solving and generate ideas for new or improved products and services. Basically, almost every industry, be it manufacturing industry, semiconductor industry using nanotechnology, pharmaceutical industry, or nano-biotechnology based industry, all of them are harvesting the knowledge and their structure is becoming increasingly knowledge-based, technology-intensive and skill based. A new class of industry has appeared on the scene in the knowledge and information society today. These industry products and services use information and knowledge as raw material and the processes are brain based. Computer software industry, IT enabled services (ITES), financial and log services, BPO industry, and media and entertainment industry are some of the examples of such industry.

Knowledge Management.

Industry has to leverage intellectual assets through knowledge management. Core competencies get highly developed when deeper understanding of and knowledge about the technologies and processes get embedded into the products. Knowledge management helps in identifying risks and in developing better customer relationship. KM supports creativity, optimizes reengineering of the processes and improves strategic planning. The fundamental dictate of KM is to get the right kind of information to the right people at the right time. KM also means sharing of the knowledge with right participants in right proportions. Organizations have to develop culture and mechanisms that allow employees to share their knowledge with others, while avoiding information overload or misuse. Organizations have to promote, value and reward sharing of knowledge amongst workers. Knowledge management utilizes tools like Artificial Intelligence and Expert Systems, knowledge modelling programmes and brainstorming sessions. Software tools like secure, store, track and manage documents, synchronous interaction tools, data mining tools, e-learning systems, and Enterprise Resource Planning tools (ERP) are often used in knowledge management. Another effective tool for collecting business intelligence and for extrapolation of trend setting predictions is the Delphi analysis. In this process a questionnaire is circulated amongst the experts in the field and their views and opinions about the future of a particular technology are sought. Discussions are held separately with each one of them at least in some cases. The data so obtained is analyzed and the differences in opinions of several experts are narrowed down after giving the experts a feed back about other's views and by sharing more information with them. A futuristic technology scenario based on the consensus is projected on the canvass and is used for strategic planning of a company. Multiple future trajectories based on such analysis and

projections can diminish the risk of strategic obsolescence.

Intranet and Extranet for Knowledge Management.

A typical KM strategy of a company is implemented through Intranet. All the functionaries are networked on the company's internal network called Intranet, which basically uses Internet protocols and is compatible with the Internet. The information regarding the projects, processes, designs, tools, inventories, consumer requirement; CPM - PERT charts etc. is made accessible to the persons concerned on a real time basis. Conference calls are set up amongst the participants. The progress of the work, schedules and bottlenecks are monitored on line. Corrective actions are taken. Such a system helps in improving productivity and lowering costs through synergy of people, processes and technology.

One of the Inter-company knowledge management systems - Supply Chain Management System - SCM uses extranets. The raw material and component vendor, the sub contractor, the manufacturing company, the marketing company, the distributor and the consumer normally form a supply chain. Extranet is formed when intranets of all these companies are interconnected. Everybody concerned is connected in real time and inventory supply from the component vendor can be regulated in real time as per the requirement of the manufacturing process. The Just In Time (JIT) inventory management achieved in this process is a big achievement of the SCM system. The second advantage of the SCM is that the stock in the manufactured goods warehouse also gets regulated as market requirements are fed back in real time, which regulates the quantity of products scheduled for manufacture at any given time. Increased productivity and lowering of costs are direct results of real-time monitoring and sharing

the knowledge about the requirements of manufacturing unit as well as that of the market demand. Interestingly, SCM is considered analogous to the game of playing cards - 'The Bridge.' You have partners as well as competitors participating in the game. You announce your bids in courteous manner. Your partner makes intelligent guesses based on his own cards. The competitor does not get an inkling of what is happening and makes speculative advances. The 'hands' you get are the fruits you and your partner can jointly enjoy.

Knowledge Management In Fishing Industry.

Satellites take the pictures of the fish shoals moving in the oceans. The Global positioning system (GPS) using the satellites determine the latitude, the longitude and depth of the location of the fish shoal and transmit it in real-time to the fishing boat. The boats get the navigational assistance from the satellite, reach the top of the spot, where fish is located and see the images of the fish shoal on the monitors of their fish finder equipment. The cache becomes voluminous. Knowledge provided by the high-tech system to the small fisherman helps in enhancing productivity of the fishing industry.

Knowledge Process Outsourcing. (KPO)

Non core processes like for example the infrastructure management is generally outsourced under BPO (Business Process Outsourcing). Since knowledge processes themselves have become part of the input raw material of the Knowledge Based industry, it is now becoming common practice to outsource the knowledge processes themselves. Research & Development, design of some of the products and processes, analysis and validation of performance as well as software programme development are outsourced to companies which have the competence in the specific areas. The quality and the performance of the

products can be enhanced and production life cycle time can be reduced with a judicious investing in R&D infrastructure in the knowledge areas related to the core product range. It is the core competence of the core product company can be profitably utilized for your company's benefit through KPO.

World Knowledge Platform

The Honourable President of India Dr. A.P.J. Abdul Kalam has given a new dimension to the Knowledge Paradigm and suggested that the World Knowledge Platform should be created. In His Excellency's address to IASAT COV 2005 leadership forum at Mumbai on 12/02/06, he has discussed the World Knowledge Platform which will provide greater opportunities for the R&D organisations, institutions, ICT, BI and other manufacturing industries from a group of nations for joint design development, production and marketing of knowledge products to meet the world market in association with the partnering nations. India and like minded nations will be strategic partners in trade, business and industry and will deliver synergistic performance of WKP in the world market. The WKP will bring together the core competence of the partnering nations for design, development and production of the knowledge products and systems. The WKP will lead to evolution of new markets through e-business network. The WKP will initially prepare a knowledge grid, which will connect, using fibre broadband, the R&D institutions, universities and the industry from the partnering nations on selected R&D missions. The WKP will utilize the convergence of bio-nano and IT technologies and take up missions in various areas related to energy management, health care, gene characterization and stem cell research as well as research for drug discovery, treatment of cancer, diabetes, natural products, tourism and hardware, software and nanotechnology, water treatment, etc.

Micro Fuel Cells connectivity

Fuel-cell-powered vehicles are passé. Portable fuel cells, called micro fuel cells, are set to make their presence felt on our palm-ery soon. When commercially available, these will replace conventional batteries like lithium-ion rechargeable in the next generation of power-hungry cellphones, laptops, digital cameras, camcorders, personal digital assistants (PDAs) and other gadgets. The market demand for micro fuel cells is building towards mass acceptance by 2008. Research firm Frost & Sullivan predicts that by 2008 as many as four million mobile devices will be powered by fuel cells. Another research firm Winter Green Research expects the micro fuel cell market to reach \$11 billion by 2013. This represents a range of PC, handset, PDA and digital devices in a variety of industrial, military and healthcare segments.

Disc protection at hand

Now you can burn copy-protected CD on your CDwriter. No more fear of somebody stealing your valuable documents and applications! The blankmedia has a prewritten session comprising DiscKeeper security elements, leaving 600MB of space free for writing your digital content and a proprietary writing software provided free. These CDRs are fully compliant with the Orange Book standard and can be read on any standard CD/DVD reader/writer. uslindia.com offers premium copy protected blank media on which files like pdf, doc, xls, ppt, jpg, bmp, mp3, html, mpg, avi, rtf, swf, flv, etc. and applications of ones' choice can be written where security is critical.

FLASH IN HARD DRIVES

In May 2006, Microsoft and Samsung showcased the technology of a hard drive with a Flash memory inside, at WinHEC (Windows Hardware Engineering Conference). However, the OS code that supports the Flash package will only ship with Windows Vista. The first unit that Samsung showed off in 2005 had 128 MB of Flash, which was used to cache start-up data and other frequently-accessed information, both to make the loading of the data into RAM faster and to boost laptop battery life. Intel plans to incorporate the Flash on an add-in card rather than putting it in the hard drive. This approach allows the Flash to be replaced easily and will keep hard drive prices down, but will raise the system price. In fact, Intel, Hynix, Micron, Sony and other companies have founded the Open NAND Flash Interface (ONFI) working group, which will develop a specification that might make it easier to incorporate Flash memory in laptops.

The initial specification is expected to be completed before 2007.

Nanotech begets BlueGene

IBM is backing a research centre being developed at Rensselaer Polytechnic Institute (RPI) worth \$100 million. The Computational Center for Nanotechnology Innovations (CCNI), based at Rensselaer Technology Park in Troy, New York, fuels further research into shrinking electronic development including computer chip. An IBM BlueGene super-computer, yet to be built, will power the effort. It will be able to perform trillion

calculations per second (70 teraflops). According to Herb Schultz, marketing manager for BlueGene IBM, to do simulations on how molecules react, which is the essence of nanotechnology, researchers need the computing power that Blue Gene delivers.

TV-on-mobile chip

Royal Philips Electronics has released a TV-on-mobile chip that is six times smaller than the previous versions. The TV-on-mobile technology provides consumers with live access to news, sports highlights, music videos, interactive programming and more on mobile phones, personal media players and other small portable devices. Named BGT215, the chip measures just 7x7 mm² but contains all the functionality of a complete digital TV front-end receiver. Small size makes it easy to integrate the chip into mobile phones, enabling extensive product differentiation for smaller, more elegant phone designs with greater consumer appeal. The chip maintains the advanced features of prior versions and delivers low power consumption.

Chip at tiny new scale Intel has developed the world's first microchip that promises to be a more powerful, efficient processors. The fingernail-sized memory chip is etched with one billion transistors that are only 45 nanometres wide—around 1000 times smaller than a red blood cell. Packing about two times as many transistors per unit area, it will help future products and platforms deliver improved performance.

Boot Camp Lets XP Run on Intel Macs

Windows XP has arrived on Intel-based Macs, courtesy of two new pieces of software—Apple's Boot Camp and Parallels' Workstation 2.1. Boot Camp is an option for anyone who'd like to run OS X but still needs Windows for productivity or gaming. Boot Camp and Parallels Workstation take

different approaches to bringing Windows to Macs. Apple's utility helps automate the process of creating a dual-boot machine that can run Windows natively. The functionality will be built into Mac OS X, dubbed Leopard. In contrast, Parallels employs Intel's virtualisation technology to run Windows and other operating systems from inside OS X. Boot camp works only on Apple's new Intel-based Macs plus a firmware update.

Increase battery life

With portable devices like cellphones, PDAs and laptops gaining popularity among consumers everyday, batteries are becoming critical selection criteria for such devices. With the costs of batteries becoming quite significant, here are a few tips which would help a user to wring the maximum performance out of the portable devices. The battery that is used in mobile phones is a compromise between the capacity, size of the size and the weight of the battery. So that leaves just one choice—to reduce the size and prolonging the life of the batteries because performance comes at a price and the original batteries costs quite a bit to replace.

Few tips The worst enemies of a battery is heat and rough handling like dropped or twisted or otherwise tortured. Know that battery will not last much longer if it is charged longer because the battery can't hold any more charge than it is designed for. Besides most of the batteries have a fixed life span of a 400-600 cycles of charging and recharging. Each time a device is left on the charger, the device starts discharging when the battery is fully charged. This cycle of charging and discharging cuts down the life of battery quite sharply. Complete discharging the battery and recharging is bad. So, charge the low battery warning, at 5-10% of the total charge.

Computers

Today microprocessors can be found in children's toys, word processors, pocket calculators, industrial robots, home appliances, etc. - to mention a few of their innumerable uses and there is practically no new machine, instrument, control equipment or information system that does not have a microprocessor in it.

Characteristics of Computer: Speed, Storage and Retrieval, Accuracy, Versatility, Automation, Diligence (no fatigue), etc.

Computer Application: Education-at school & home, libraries, scientific research, office automation, report generation, banking, insurance, engineering colleges, management tool, industrial application, communication, traffic management, medicine, weather processing, space research, defence, stock & share market, games, payroll package, salary slip generation, tax calculation, fashion designing, product design, system analysis, hospitals, architecture, mass mailers, online ticketing, booking vacation, etc.

Classifications

The first four generations of computers were based on the technology of the age to which they belonged. They were thus based on the vacuum tube technology; the transistor and printed circuit technology; the integrated circuit technology and the Very Large Scale Integrated (VLSI) technology, respectively. The marvel of the fourth generation VLSI technology is that a microchip weighing a few grams — a thin silicon chip using 0.13 micron technology (SDRAM) has a memory capacity of one Gigabyte (10^9 or 100 crores of

bits of 0s and 1s equivalent of 8,000 newspaper pages). (Note: bit is an abbreviation for the binary digit). Presently the development has entered areas of "Artificial Intelligence." These are generally called *Fifth Generation computers*.

Today computers can be classified as mainframe computers, mini-computers and micro-computers.

Mainframe computers are expensive, large, centralised computer facilities where a super computer (like the CRAY or PARAM or CYBER) or a large computer (like the DEC 10, IBM S390 models etc.) is connected to several terminals. A multi-user mainframe computer has a large memory and is capable of speeds of the order of several billions of floating-point operations per second (Flops).

Mini-computers are also multi-user computers comparatively operating at slower speeds and lesser memory. In the mini-computer category are the extremely popular DEC10, PDP-11 and the VAX-11 computers of the Digital Equipment Corporation (DEC).

Micro-computers are based on standard micro-processors marketed by Intel, Motorola, etc. A micro-processor is a single silicon electronic chip which contains the ALU and the control unit.

Micro-computers are often called Personal Computers or PCs since they were originally intended to be single user devices either at the office or at home. The home computer is a PC providing education, entertainment, information and communication facility at home. Now-a-days one can send email, greetings, chat, play games, hear music,

play video, videoconferencing, do shopping, banking operations, reserve travel tickets, with the help of a home PC and internet without leaving one's home.

The Micro World

The micro-computer industry was revolutionised by the entry of IBM, which started marketing PCs in 1980.

Binary System

Zero and one in their endless combination constitute binary system on which computers are based. A scheme of numeration with base ten requires ten symbols or ciphers (including zero), whereas an arithmetic with the base two requires only two ciphers: 0 and 1.

The binary numbers for the following numbers are written as 0-0; 1-1; 2-10; 3-11; 4-100; 5-101; 6-110; 7-111; 8-1000; 9-1001; 10-1010; 11-1011; 15-1111; 16-10000.

Boolean algebra was developed to deal with binary numbers. Under the binary system all ordinary arithmetical operations are reduced to their simplest form. The binary system of numeration was used early in the seventeenth century by Thomas Harriot.

Understanding Computer

CPU The System Unit contains the heart of the micro-computer - a micro-processor, the Dynamic Random Access Memory (DRAM), floppy disk drive(s) and Zip drive for auxiliary storage, CD-ROM drive/writers for multimedia, a built-in speaker and some expansion slots for system enlargement. Additional dynamic memory boards, chips and modules can be used to enhance the memory of the micro-computer. The ROM stores permanently programs essential for the operation of the micro-computer. Multimedia card (sound card) with external speakers and a MODEM (as an interface with telephone line) can be added to the system unit to enhance its capabilities such as for internet access, etc.

Motherboard A motherboard is designed from chipset up to support a specific type of processor and its performance and list of features depends on the chipset.

What makes this component so important is the fact that all the other components, such as, video card, sound card, hard drives, CD-ROM drives, and other peripheral's like printer, modem, etc., plug into and communicate with each other via the motherboard. The motherboard acts as the central (and largest) part of any computer.

Chipset The motherboard is built around a chipset that supports a specific class of processors and memory. The main system chipset, commonly called the North Bridge, comprises the logic circuits that contain a blueprint of how the processor, memory and other integrated components on the motherboard are meant to communicate. It acts like a hub, controlling the transfer of data between the processor, its cache, system buses and various peripherals. The timely transfer of data free of error is probably the most important job of the system. Its proficiency in performing this task dictates how well the system works as a whole. Other than the North Bridge, motherboards also have a separate South Bridge that integrates, manages and controls all 'external' IDE, ISA, PCI, USB, IEEE, etc., devices.

Nowadays motherboards with integrated graphics and audio features are getting popular owing to its low cost.

Memory Today, most PC systems (Personal Computer) come with 256 MB to run basic applications. 512 MB-1 GB is needed for optimal performance when using graphics and multimedia programs.

The Role of Memory in Computer English in the computer industry commonly use the term "memory" to refer to RAM (Random Access Memory). A computer uses RAM to hold temporary instructions and data to complete tasks. The greater the

CPU (Central Processing Unit), to access instructions and data stored in memory very quickly. A good example of this is when the CPU loads an application program - such as a word processing or page layout program into memory, it allows the application program to launch and work faster and efficiently as possible.

Memory and Storage The term memory refers to the amount of RAM installed in the computer, whereas the term storage refers to the capacity of the computer's hard disk. Another important difference between memory and storage: the information stored on a hard disk remains intact even when the computer is turned off. However, any data held in memory is lost when the computer is turned off.

Megahertz (MHZ) Memory chips have the ability to synchronise themselves with the computer's system clock, making it easier to measure speed in megahertz, or millions of cycles per second. Therefore, it makes it easier to compare the speeds of different components and synchronise their functions. In order to understand speed better, it's important to understand the system clock.

System Clock A computer's system clock resides on the motherboard. It sends out a signal to all other computer components in rhythm. Each wave in this signal measures one clock cycle. If a system clock runs at 100MHz, that means there are 100 million clock cycles in one second. Every action in the computer is timed by these clock cycles, and every action takes a certain number of clock cycles to perform. It's possible for the CPU and other devices to run faster or slower than the system clock. Components of different speeds simply require a multiplication or division factor to synchronise them. The variations could be because most of the time, the system bus and other components run at different speeds.

Cache Memory Cache memory is a rela-

tively small amount (normally less than 1MB) of high speed memory that resides very close to the CPU. Cache memory is designed to supply the CPU with the most frequently requested data and instructions. Because retrieving data from cache takes a fraction of the time that it takes to access it from main memory, having cache memory can save a lot of time. If the information is not in cache, it still has to be retrieved from main memory, but checking cache memory takes so little time, it's worth it.

Levels of Cache: Today, most cache memory is incorporated into the processor chip itself; however, other configurations are possible. In some cases, a system may have cache located inside the processor, just outside the processor on the motherboard, and, or it may have a memory cache socket near the CPU, which can contain a cache memory module. Whatever the configuration, any cache memory component is assigned a "level" according to its proximity to the processor. For example, the cache that is closest to the processor is called Level 1 (L1) Cache. The next level of cache is numbered L2, then L3, and so on. Computers often have other types of caching in addition to cache memory. For example, sometimes the system uses main memory as a cache for the hard drive. It's important to note that the term cache can refer specifically to memory and to other storage technologies as well.

Networking

A network is the means by which computers share and exchange information and resources across either short distances (Local Area Networks) or globally (Wide Area Networks). Advantages of Networking are: i. Sharing of data, ii. Transfer of files, iii. Data security; iv. Less memory usage, v. Common hardware, software resources, vi. Cost sharing or less expensive.

Making the best use of networking tech-

technology is about making better use of business resources, enhancing productivity and efficiency, reducing costs and gaining competitive advantage. Networking enables everyone in an organisation to communicate with each other and share resources with everyone else—giving them access to data held in individual PCs, by remote office sites or external suppliers and giving users the ability to share printers, fax, CD-ROM and modem technology etc. Networks can be designed for organisations of all sizes from the small office with between two and ten workstations to the largest international corporations linking thousands of workstations.

Types: LAN - Local Area Network, MAN - Metropolitan Area Network, WAN - Wide Area Network.

A LAN is a group of desktop computers located relatively close to one another and connected through cabling system to enable them to share access to computing resources. LAN satisfies two fundamental requirements—(a) *Sharing information* and (b) *Sharing computer resources*. A LAN typically consists of PCs on the same floor of a building or situated on different floors in the same building. It may even consist of computers which are within the factory area, but spread across various buildings like administrative block or production block or warehouse, etc.

LANs consist of workstations which are connected to a central computer called file server (special purpose computers). [Workstations are the nodal computers on which users do their work—like executing their own application programs locally and sending request to the file server for any of the network function and receiving the response from the file server. All workstations on LAN would have a Network interface.] LAN's topology are of 3 types (a) Star (b) Ring and (c) Bus.

It mainly consists of the following three components:

Medium: Over which data transfer takes

Wi-Fi phone

Netgear and Skype have unveiled a Wi-Fi phone that functions over the voice-over-IP service. The phone allows Skype wireless service users to call anyone anywhere in the world. The Skype users can use the phone on any wireless Internet connection after entering their username and password. The phone will function on encrypted Wi-Fi networks as long as the user has the proper network ID.

place. It can be a telephone line; a coaxial cable or a fibre optical cable.

Network Interface Unit (NIU): It provides an interface between the LAN medium and the computer hardware, generally a NIU directly interfaces with the main system.

Network Software: Runs in each of the computer systems connected to LAN and provides network-wide communication capabilities to the user software. A part of this software resides in the network interface unit.

When computers are spread over a larger geographical area, like intercity, intracity, across buildings, etc., and still they are connected to one another in order to share information, the configuration is called *Wide Area Network (WAN)*. WANs are extensions of LANs. Two LANs can be connected by telephone lines and modems. A special purpose computer, and a network operating system (NOS) is required to establish the connection. WAN, therefore, does not take full advantage of the resources lying but also of non-residing resources working from home, during a connection with external suppliers and from a building links to remote offices.

WINDOWS VISTA

Windows Vista is Microsoft's new OS, brought out in six versions, from Starter to Enterprise editions. All versions are available in both 32-bit (x86) and 64-bit (x86-64) architectures, except Windows Vista Starter (only in 32-bit architecture).

Windows Vista Starter Much like the Windows XP Starter Edition, this edition will be limited to emerging markets, mainly to offer a legal alternative to using unauthorised copies. It will be severely limited, for example only allowing a user to launch at most three applications with a user interface at once, will not accept incoming network connections, and physical memory is limited to 2 GB. Additionally, only Celeron and Pentium III processors from Intel, and AMD's Duron, Sempron and Geode processors are supported.

Windows Vista Home Basic Similar to Windows XP Home Edition, Home Basic is intended for budget users not requiring advanced media support for home use. The Windows Aero theme with translucent effects will not be included with this edition. Home Basic will support up to 8 GB of physical memory.

Windows Vista Home Premium Containing all features from Home Basic, this edition will additionally support more advanced features aimed for the home market segment, such as HDTV support and DVD authoring. Extra games, mobile and tablet computer support, file system encryption, and a photo management application are also included. This edition is comparable to Windows XP Media Center Edition and Tablet PC Edition.

Home Premium will support up to 16 GB of physical memory.

Windows Vista Business Comparable to Windows XP Professional, and aimed at the business market. Does not include the Media Center features of Home Premium, but does include the IIS web server, fax support, offline files, dual physical processor support, Remote Desktop, ad-hoc P2P collaboration capabilities, and support for 128 GB of memory. Product activation is not present in this edition.

Windows Vista Enterprise This edition is aimed at the enterprise segment of the market, and is a superset of the Business edition. Additional features include a single-session version of Virtual PC, multilingual user interface support, BitLocker Drive Encryption, and UNIX application support. This edition will not be available through retail or OEM channels, but through Microsoft Software Assurance.

Windows Vista Ultimate This edition combines all the features of Home Premium and Enterprise editions, and additionally comes with podcast creation support — which Microsoft has dubbed "blogcasting" — a game performance tweaker (WinSAT), DVD ripping capabilities, and special online services for downloadable media, as well as additional customer service options. The Ultimate edition is aimed to be the most impressive edition of Vista, aimed at high-end PC users, gamers, multimedia professionals, and PC enthusiasts.

"Home Basic N" and "Business N" editions of Windows Vista will additionally be available

in the European Union. These editions will ship without Windows Media Player, as required by sanctions brought against Microsoft for violating anti-trust laws.

Capable: A modern processor (at least 800MHz1); 512 MB of system memory; A graphics processor that is DirectX 9 capable.

Premium: 1 GHz 32-bit (x86) or 64-bit (x64) processor1; 1 GB of system memory;

A graphics processor that runs Windows Aero2; 128 MB of graphics memory; 40 GB of hard drive capacity with 15 GB free space; DVD-ROM Drive3; Audio output capability; Internet access capability.

Features available in specific premium editions of Windows Vista, such as the ability to watch and record live TV, may require additional hardware.

Linux

Linux is a scaled-down UNIX operating system originally developed by Linus Torvalds, then a University student in Finland, now used in everything from PDAs, watches, PCs, consumer electronics, servers and supercomputers.

Beginning Linux was originally Minix, an educational version of UNIX developed by Andrew Tannenbaum. As an interesting aside, we might be talking about Minix today if not for the licensing that Minix required. Few people have heard about Minix today, far less than have heard about Linux.

Early on, Linux grew as a cheap UNIX that ran on Intel-based PC equipment. At the time, you could purchase UNIX for PCs, but at a high cost (as much as \$1500 for a developer's version of Interactive UNIX).

Linux Distributions Technically, Linux is really just an OS kernel, produced under the direction of Linus Torvalds. But, Linux usually comes with a set of utility, desktop, and server programs, including networking suites, Web servers, file systems, compilers, and a whole lot more. For example, Linux includes the XFree86 version of the X Window System, the GNU C compiler GCC, and code from quite a lot of other sources. But to make

things confusing, there's more than one version of Linux.

A number of organisations, commercial and some volunteer, collect together versions of all these programs with the Linux kernel, test that everything works together, and then release what is called a distribution of Linux.

The main Linux distributions include: RedHat, Kondara MNU/Linux, SUSE (self CD-loading), Linux Mandrake, Knoppix, Slackware.

The best Linux distribution to try is the one that is handy or readily available from friends, computer magazines or books, etc. For further reference - url:<http://sourceforge.net>

Computer virus

Computer viruses are programs that spread across computers by attaching a copy of itself to the files on your infected computer. When you run the infected file the virus gets into action. A virus is usually harmful and can corrupt data, overwrite files, or use up system resources, and slow it down in the process. Some may be merely disturbing like sending email using your addressbook.. Viruses are usually written by programmers to cause trouble.

Open Source

Open Source movement is a large movement of programmers and the computer users that advocates unrestricted access to the source code of software. It grew out of licenses like BSD, the ubiquitous access to Unix source code at universities. The boundary between the Open Source and Free Software movement is blurred. Richard Stallman and Linus Torvalds personify the trend that created Open Source Community of developers. The biggest strength of Open Source has been that it is free. Besides, it has got the advantage of peer-review and sustained innovation in software. The basic idea behind Open Source is, when programmers read, redistribute and modify the source code for a piece of software, the software is

evolving. People improve it, adapt it and fix its bugs themselves at astonishing speed. Almost everybody knows Linux but there are other success stories like FreeBSD (Unix-like OS); GNU (mother of all FOSS applications, esp., the GNU Compilers), Firefox (web browser as an IE alternative and used by 100 million), Apache (web server hosting numerous websites), MySQL (database server), php (personal home page: web programming language created by Rasmus Lerdorf powering dynamic websites and enterprise as well), Thunderbird (alternate email client to Outlook, without security flaws), KDE (graphical desktop environment FOSS OS), and Debian (a distribution of Linux termed as 'totally free'). ■

Internet

As of March 31, 2006, according to Internet World Status, over 1.02 billion people use the Internet. Google search engine claims indexing 8.05 billion pages whereas Yahoo claims 19.2 billion. Internet was conceived in the form of computer networking at the Massachusetts Institute of Technology in 1962. After a incubation period of seven years the firstborn of the species appeared on the scene in September 1969 as Advanced Research Project Agency Network (ARPANET) of Department of Defense of Government of USA. The DOD was

working on a complex project where the input of very high academic and technological content was required to be integrated. The work was being carried out at Stanford Research Institute, University of California at Santa Barbara and at Los Angeles and University of Utah. The computers at these four places were networked together and communications between them were established thus creating the ARPANET. ARPANET consisted of four major technological breakthroughs. (1) Interface message processor, (2) Network topology, (3) Network metrics and

(4) Architectural design. M/s Bolt Beranek and Newmon, M/s Network Analysis Corporation, University of California at Los Angeles (UCLA) and DARPA were the agencies working together to evolve the ARPANET. The first public demonstration of the network was organised during the International Computer Communication conference in September 1972 and presented by Bob Kahn, the designer of the ARPANET architecture. The number of computer users connected to the network was 15 in 1971 and rose rapidly to 407.1 million in November 2000.

The next major milestone was in 1982 when Defense Data Networking (MILNET) created TCP/ IP protocol suites for ARPANET and other military networks. It is natural to expect that when large number of users get on to a network, all of them must use the same standard formats and protocols so that the data can be transferred from one system to another in an orderly fashion. These Transfer Protocol and Internet Protocols (TCP & IP) have now been universally accepted. Once the network was established, the users wanted to transfer large data files. Hence came the "File Transfer Protocol" (FTP) (1971). Subsequently E-mail became a reality in 1972.

Computers and Communication It was in 1990 that ARPANET was converted into a

public network and opened to all the citizens. The formal birth of Internet was registered, when Internet Society was chartered in 1992. Internet grew rapidly due to its widespread applications and it provided utility and services to the common man in the society. The first requirement was to develop the capability of transferring files and data from one computer to another. For this purpose, a worldwide network of computers had to be established in such a way that any computer anywhere in the world could be connected to any of the millions and billions of computers - like a spiderweb. No wonder then that this Internet infrastructure was christened as World Wide Web (WWW).

Internet 2: Thirty four US research institutions joined hands in 1996 to form the Internet 2 consortium. Meanwhile, US government also introduced a proposal for next generation Internet - a virtual initiative focussed on federal agencies like NASA, Defense, etc. Both the initiatives being complimentary, have the same goal. Internet 2 offers super speed connectivity of 155mbps through fibre optic backbones and network protocols. It is believed to achieve a speed 100-times faster than a typical US University-Lab connections and almost 3000-times faster than dial-up connection ■

Web 2.0

Web 2.0 refers to a second generation of services available on the World Wide Web that allow people to collaborate and share information online. Unlike the traditional static Web pages of the first generation, Web 2.0 gives users an experience akin to desktop applications. Web 2.0 applications often use a combination of techniques devised in the late 1990s, including public web service APIs (dating from 1998), Ajax (1998), and web syndication (1997). They often allow for

mass participation (web-based social software). The concept may include blogs and wikis. Web 2.0 was originally created as a marketing phrase. O'Reilly Media and MediaLive International popularised the term as the name for a series of web development conferences that started in October 2004. CMP Media, which purchased MediaLive, claims the term as a service mark for live events, reserving exclusive use of the term for its conferences.

Wireless access

Hi-Fi, means 'wireless fidelity.' It is the popular term for a high-frequency wireless local area network (WLAN) that is generically referred to as 802.11 network, more specifically the 802.11b nomenclature given by the Institute of Electrical and Electronics Engineers (IEEE). It is part of a series of wireless specifications developed by IEEE. It scores over wired LAN with mobility and ease of set-up. Products marked 'Wi-Fi Certified' (a registered trademark) by the Wi-Fi Alliance are interoperable with each other, even if they are from different manufacturers.

Wi-Fi Facts: 802.11 refers to a family of specifications developed by IEEE for wireless LAN. The several wireless specifications are mentioned below:

- 802.11: Applies to wireless LANs and provides 1 or 2 Mbps transmission in the 2.4 GHz band using either frequency-hopped spread spectrum (FHSS) or direct-sequence spread spectrum (DSSS).
- 802.11a: An extension to 802.11 that applies to wireless LANs and works on the 5GHz frequency spectrum at a maximum data transfer rate of 54 Mbps.
- 802.11b: Also referred to as 802.11 High Rate or Wi-Fi, it is an extension to 802.11 in the 2.4 GHz band.
- 802.11g: Offers wireless transmission over relatively short distances at up to 54 Mbps and operates in the 2.4 GHz range.

In India, only the 802.11b standard working on 2.4 GHz frequency range has been delicensed for indoor use. The 5GHz spectrum has not been delicensed for use since it coincides with the spectrum used by the police department.

WiMAX

WiMax stands for 'worldwide inter-operability for microwave access.' The term 'WiMax' is the name created by the WiMax Forum to refer to its definition of 802.16. The WiMAX technology supports data-transmission rates of up to 70 Mbps with a range of up to 48 km, much farther than Wi-Fi. It ensures compatibility between different vendors' fixed-wireless broadband equipment to provide fast wireless data connections between fixed points over long distances. Laptops would incorporate WiMax by 2007.

WiMAX is the 802.16x specification for wireless metropolitan area network (WMAN), developed and promoted by the WiMAX Forum (comprising industry like Intel, Nokia and AT&T), to standardise it universally. The 802.16 specification is the designation offered by the IEEE, the de-facto body to authorise Wi-Fi standards globally. WiMAX will complement Wi-Fi.

The WiMAX signal could be sent as a broadband signal over a large area. The wireless signal would then be connected to a Wi-Fi box that would broadcast the signal to laptops and PDAs.

Bluetooth

Bluetooth technology is a cutting-edge open specification that enables short-range wireless connections between desktop and notebook computers, handhelds, personal digital assistants, mobile phones, camera phones, printers, digital cameras, headsets, keyboards and even a computer mouse. In a nutshell, Bluetooth technology unplugs your digital peripherals and makes cable clutter a thing of the past.

What is a blog?

A blog is a web page made up of usually short, frequently updated posts that are arranged chronologically — like a what's new page or a journal. The content and purposes of blogs varies greatly — from links and commentary about other web sites, to news about a company/person/idea, to diaries, photos, poetry, mini-essays, project updates, even fiction.

Blog posts are like instant messages to the web. Many blogs are personal, "what's on my mind" type musings. Others are collaborative efforts based on a specific topic or area of mutual interest. Some blogs are for play. Some are for work. Some are both.

Blogs are also excellent team/department/company/family communication tools. They help small groups communicate in a way that is simpler and easier to follow than email or discussion forums. Use a private blog on an intranet to allow team members to post related links, files, quotes, or commentary. Set up a family blog where relatives can share personal news. A blog can help keep everyone in the loop, promote cohesiveness and group culture, and provide an informal "voice" of a project or department to outsiders.

Types of blogs

There are various types of blogs, and each differs in the way content is delivered or written.

A blog can be defined by its incorporation of media: a blog comprising videos is called a vlog, one comprising links is called a linklog, or one comprising photos is called a photoblog.

Blogs can also be defined by which type of device is used to compose it. A blog written by a mobile device like a mobile phone or PDA is called a moblog.

A blog can also be defined by its genre. For example, if a blog is mainly about politics, it can be called a political blog. A blog about travel could be called a travel blog.

A blog can also be defined by the legal entity of its publishers. A blog can be private, as in most cases, or it can be for business purposes. Blogs, either used internally to enhance the communication and culture in a corporation or externally for marketing, branding or PR purposes are called corporate blogs.

A select list of weblog software:

User-hosted: Software packages installed by weblog authors to run on their own systems: b2evolution; bBlog; Blogosphere; bloxom; Community Server; Drupal; Greymatter; MvBlog; Movable Type (also offered in developer-hosted form as TypePad); Nucleus CMS; Radio UserLand; Roller Weblogger; Serendipity; Textpattern; WordPress (also offered in developer-hosted form as Wordpress.com)

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Protecting mobile phones from viruses

Mobile phones have long outgrown their original purpose of enabling people to talk to each other on the move. They are now multimedia devices which could, in the near future, replace a variety of items like game consoles, messaging terminals, music players, digital cameras, security badges, credit cards, digital diaries, health monitors, alarm clocks, navigation guides, interactive newspapers or even TV.

The good news is that you are not at risk if you have a cell phone that enables you merely to talk and SMS. The problems begin if the phone is enabled to handle data and or has Bluetooth capability.

A cell phone virus is quite like a computer virus. Once you receive and install the virus, it starts looking for other Bluetooth phones to infect.

What virus does? The virus sends infected MMS messages to every phone number in your address list. Since sending MMS messages is not free, you're actually paying money to send a virus to your friends, family members and business associates. The virus can tamper or delete all the contact details and calendar entries in the phone; delete or lock up certain phone applications or crash; show up as games, pornographic material or free downloads; a text messages camouflaged with a stolen the subject line from a friends' message, etc. In all these transfer methods, the user installs it knowingly or otherwise. But clever virus writers have the knack of getting you to open and install the bug by disguising it as a desirable application. Mobile viruses can cause trouble as well as financial losses.

Contact the handset company's toll-free number for any support which provides adequate information and assistance to debug your phone yourself.

Dos and Don'ts: * Enable Bluetooth only when you need it. * Learn to say 'No': If your Bluetooth is on accept only a file that you are expecting. Never accept an unknown file. * Avoid downloading unscanned material from sharing networks like games, ring tones and other programs from legal or official websites. * Never install any application you are not sure of.

Blu-ray vs HD DVD

A Blu-ray Disc (BD) and HD DVD are next-generation optical disc formats meant for high-density storage of high-definition video and data. The Blu-ray Disc Association's Blu-ray technology is spearheaded by Sony. As of 2006, Blu-ray has information capacity per layer of 25GB. HD DVD is the primary rival to Blu-ray, championed by Toshiba, NEC Corporation, Microsoft, and Intel. HD-DVD has a disc capacity of 30GB.

All movies currently released (as of 2006) have been done on single-layer discs. The goal is to reach the standard of 50GB+ dual-layer discs capable of storing four hours of high-definition MPEG-2 video content—similar to the four hours of high-definition video content. Initially it may be more expensive to produce.

SCIENCE PANORAMA

PART
04

Science Scan

Indian Stealth Technology

India could soon be the third country in the world, after the US and France, to have a stealth bomber fighter aircraft in its armoury. The Kolkata-based Indian Association for Cultivation of Science (IACS) has developed a technology to convert ordinary light combat aircraft into stealth jets that would go undetected on radar.

According to IACS scientists, the technology uses a special material to construct a shield on the plexiglass canopies. It is the glass cover of the cockpit that usually betrays the presence of an aircraft as it reflects the laser beam that is emitted to catch them on the radar. The shield will cover the cockpit and deflect the laser beam on the shield in all directions. This will make sure the aircraft remains undetected on the radar and even to AWACS. IACS' efforts will give a big boost to India's indigenisation efforts.

Last year of the Aibo

Sad news for robot lovers! Sony's Aibo Entertainment Robot, the doglike machine which walks, barks and recognises speech, is being put to sleep.

The Aibo was introduced in 1999 and the company is stopping manufacturing in a bid to improve its financial position. Though not popular in India, the Aibo gained a cult-like following all around the world in a short time. The robot dog could bark, push a ball, lift its leg, and "learn," becoming more adept at behaviour over time. With a vocabulary of 1,000 words and an ability to understand more than 100 words, including some in

Spanish, the Aibo was fitted with a video camera in its head through which images were wirelessly relayed to a laptop. This meant owners could actually see the world from a dog's viewpoint. The only prohibitive thing about the Aibo has been its price as it costs about \$2,000 (Rs 90,000). There are 150,000 Aibo owners worldwide.

No cancer from cellphone

A four-year survey conducted by the scientists at the Institute of Cancer Research in London and 3 British universities has found no co-relation between mobile phone usage and glioma cancer. Using a mobile phone does not aggravate the risk of developing this most common type of brain tumour. In 2005, Swedish scientists had reported that cellphones could pose a higher health risk to people living in rural areas. The UK researchers contradict the Swedish findings.

Global Biodiversity Outlook 2

Over the past few decades, human activity in the name of development has adversely affected global biodiversity in an unprecedented way. There is no satisfactory measures to check or reverse it. The latest trend has been brought out by the Global Biodiversity Outlook 2 report of the United Nations Convention on Biological Diversity. The fact that extinction rates for species are shooting up by as much as 1,000 times the background rates, and that 12-52% of species belonging to certain higher groups face the threat of extinction, highlights the role of human activities in the destruction of biodiversity. Also, the ability of biological

resources to renew themselves to match human demand for resources has been reduced by 20%. If the current extinction rates continue, planet earth will witness the first mass extinction induced by human activity. Against this backdrop, the Convention on Biological Diversity, a global treaty created in 1992 and strengthened by the Conference of Parties in 2002, set 2010 as the target to achieve significant reduction in the current rate of biodiversity loss at all levels. According to the report, the success achieved is far from satisfactory.

Metamaterial

A group of researchers from Britain and US are designing the blueprint of a manmade material, called metamaterial, which they think will be able to bend ray of light so that it does not reflect or cast shadows.

Metamaterial in electromagnetism parlance refers to a special type of material which is generally used in the field of optics and whose properties are not found in natural substances. The first product launched in 2007 will be very thick which people would rather call a shield than a cloak.

John Pendry and his team, Imperial College, London, have created a cloak out of the material. When worn, the cloak will bend light just the way boulder bends a river stream. Another advantage is that the material could be specially tuned to bend electromagnetic radiation like radio waves and visible light or even masking microwaves. The research has numerous military applications.

Climate Change and Algae

It is believed that the nature has the best sensors to detect climate change. Algae is said to be one. All algae use carbon dioxide but, while some lock up this gas in their calcified skeletons, others do not do so.

Other groups of algae produce compounds such as dimethyl sulphonioacetate that can become climatically active. To understand this one need to be able to differentiate the algal types and count them using equipment that is precise and cheap enough that very many can be used. To that end Southampton University, Southern England, and the School of Electronics & Computer Science are developing a sensor which, when dropped into the sea, can record information about the types and quantities of algae present. This provides vital information for specialists in climate change. Algae flow through the device one at a time and at high speed. When the device shines light at the algae, they respond by emitting light at different wavelengths, allowing them to be characterised. The device records data about such properties of algae which tell us about the size of particles and the types of membranes. Algae are now known to influence the climate in various ways. Much of the existing progress made by oceanographers has been based on studying satellite images in colour. The sea can have many different colours and what one sees depends not only on weather and light conditions but also on what plant life the water contains. Colour measurements have become an important tool for studying plant life in the ocean. Calculating chlorophyll from measurements of water colour, is one of the successes of optical oceanography.

New seabed gas source

According to a joint research team from Tokyo University and the Japan Agency for Marine-Earth Science and Technology, a 100 meter-long column of "flammable ice" exists beneath the seabed of the Sea of Japan off Joetsu, Niigata Prefecture.

Flammable ice is methane hydrate, composed of methane and water. Part of

the column is exposed, and judging from its size, the team believes there is a large natural gas field under the seabed. Methane hydrates are available on the seabed in the Gulf of Mexico, off Vancouver, and other places in the world. This is the first discovery of the substance near Japan.

Methane hydrate is created when molecules of flammable methane, the main component of natural gas, are confined in lattice like structures composed of water molecules. As per estimation, there is sufficient flammable ice under the seabed in areas surrounding Japan to supply Japan for 100 years, based on current gas consumption levels. Because of this, methane hydrate is drawing attention as a new natural resource.

X-Ray alternative

How many times have you heard about the negative effects of X-ray radiation on health? Even though the bad effects of radiation has not been conclusively proved, there is an alternative in sight. The terahertz laser! It works like an X-ray by casting through thin layers and identifying what is beneath without putting anyone's health at risk. Currently researchers like Prof. Malcolm Dunn of St. Andrews University, is using less powerful infrared laser integrated with lithium niobate, a material used for optical devices to generate terahertz pulses. Though the terahertz beam is invisible, it can be bounced off gold plated metal mirrors to help in focusing the tuning. The advantages are that the intensity of terahertz radiation is less than that of 1/1000th of a mobile phone; an active terahertz investigation would get one exposed to lesser amount of terahertz radiation as compared to radiation effects from lighting. In the area of dentistry for imaging teeth, security screening and screening of electronics for non-destructive imaging of integrated circuit.

SASER

Lasers, after 40 years of its development and improvisation, are now multi-billion dollar technology. Now it is the turn of light. SASER or sound amplification by stimulated emission of radiation, a coherent beams of sound that are composed of packets of sonic vibrations called 'phonons.' The Saser, developed by Dr. Glavin, Dr. Kent and their colleagues constructed from thin layers of semiconductors, an arrangement called superlattice. This lattice consists of sheets a few atoms thick serving as electron-traps. The Sasers are just like excited photons in a laser. In that excited state, when more electrons are added by electrically charging the lattice, phonons beget more phonons, bouncing back and forth between layers of lattice till they flow-out as phonon beams.

Last Human Chromosome sequence

Scientists have reached a landmark point in one of the most important scientific projects by sequencing the last chromosome in the Human Genome, the so called "book of life." The project was started in 1990 to identify the genes and DNA sequences that provide a blueprint for human beings. The human genome has an estimated 20,000 to 25,000 genes. Chromosome 1 is the biggest and contains, per chromosome, the greatest number of genes. Chromosome 1 contains nearly twice as many genes as the average chromosome and makes up 8% of the human genetic code. It is packed with 3,141 genes and linked to 350 illnesses including cancer, Alzheimer's and Parkinson's disease. The sequencing of the last chromosome, in fact, closes the book on an important volume of Human Genome Project at Sanger Institute in England. The project was headed by Dr. Simon Gregor at Duke University, USA.

Researchers around the world will be able to extract vital information needed for treating cancer, autism, mental disorder, and other illnesses.

The Next Generation Tyres

Radical new tyre design by Michelin was

displayed at the 2006 Philadelphia car show. These tyres are airless - without inflated tube. The flexible rims with special ribs support the wheels. In future no one would require repair kits, no more air valves, and no more air compressors at fuel stations.

Food and Nutrition

Food is the chief of essential materials which the body needs for its well-being. These essential materials are called 'nutrients'. Good food is indispensable for health at all stages of life and for satisfactory growth during infancy, childhood, adolescence and adulthood. Wholesome food in adequate quantities is no less important for pregnant and nursing women since they undergo a severe nutritional stress.

Balanced diet In order to obtain adequate amounts of each of the different nutrients, the daily diet should include appropriate quantities of a variety of different foodstuff. A diet in which various foodstuff are mixed in suitable proportions to carry out adequately.

Eating habits have changed with the times. The changes are faster now. The latest is 'fast food' for a fast life. Human diet is not restricted to any special category of food. Whereas most animals stick to a routine menu, man can and does eat a variety of foods, of both plant and animal origin. Variety is, for him, the spice of life, more so in foods than in anything else. This natural desire for variety is justified by the fact that no single food provides us with all the nutrients that we need.

Cereals, like rice or wheat which form the staple food of mankind, supply us only with a

fraction of our nutritional requirements. We have to supplement cereals with other foods that provide plenty of fats and proteins and minor quantities of a number of vitamins and minerals.

A balanced diet simply means a diet that will supply all the nutrients necessary for the growth and development of the body. In India, a balanced diet has become an imperative since most Indians consume foods that provide more carbohydrates and fats than proteins.

Balanced Diet

| Food Group | Food Stuff | Amount per day (g) |
|------------|---------------------------|--------------------|
| I | Rice, wheat and millets | 350 |
| | Oil, ghee, butter etc. | 35 |
| | Sugar and Jaggery | 40 |
| II | Milk, curds etc. | 225 |
| | Pulses, dried beans, nuts | 45 |
| | Meat, fish, egg | 60 |
| III | Fruits | 30 |
| | Green leafy vegetables | 150 |
| | Other vegetables | 125 |

The table above gives the amounts of the various foods that will make up a balanced diet for the average Indian. The quantity of food varies according to age and the type of work.

Classification of nutrients: (In foodstuffs):

(1) Carbohydrates, (2) Fats, (3) Proteins, (4) Minerals, (5) Vitamins and (6) Water.

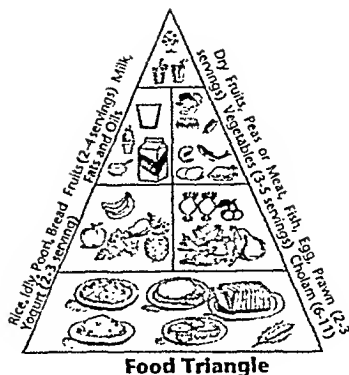
Proteins, fats and carbohydrates are called Macro Nutrients.

Proteins (Greek: 'Proteios' meaning first) are the chief substances of the cells of the body. They form important constituents of muscles and other tissues and vital fluids like blood. Enzymes, which assist in the digestion of food, and antibodies which are the body defences against infections are also mainly protein in nature.

The nutritive value of protein depends on the essential amino acid composition. Amino acids are the building blocks of tissue protein. There are some 20 amino acids commonly found in dietary proteins. Of these, 10 amino acids can be synthesised by the body itself, whether by mutual conversion among amino acids or from nonprotein sources. But 10 amino acids cannot be so synthesised and have to be supplied through diet. These are called essential amino acids. Adults require 8 essential amino acids while children require 9 or 10.

Fat is a necessary ingredient in diet. It is a concentrated source of energy and supplies per unit weight more than double the energy furnished by either protein or carbohydrates. Some fats, especially vegetable oils, provide what are called essential fatty acids, linoleic and arachidonic acids, to the body.

Fats that circulate in the blood are of many types—triglycerides, phospholipids, etc. The quantity and quality of fat consumed affects the level of cholesterol in the blood. Some fats like groundnut oil, sesame oil or sunflower oil which contain a high proportion of polyunsaturated fatty acids do not increase blood cholesterol levels greatly. Others like butter, ghee and hydrogenated vegetable oils (vanaspati) contain high proportions of saturated fatty acids and greatly increase cholesterol levels. It is also found that consumption of smaller amounts of fat at differ-



ent times causes less increase of cholesterol than a large amount of fat taken at a time.

Carbohydrates include every kind of starch and sugar. Grain foods are largely composed of starch and foodstuffs like cane sugar and glucose are pure carbohydrates. They form the main source of energy for the body. Being a cheap source of energy, carbohydrates form the bulk of Indian diet.

Vitamins and minerals comprise micro nutrients as distinguished from proteins, fats and carbohydrates—called macro nutrients.

Vitamins can be broadly divided into fat-soluble and water-soluble vitamins. Vitamin A, D, E and K are fat-soluble vitamins. Vitamin C and B (including Vitamins B₁, B₂ and other B-Group vitamins) are water-soluble.

The vitamins are necessary auxiliaries in metabolism. They combine with specific proteins, as parts of the various oxidative enzyme systems which are concerned with the breakdown of carbohydrates, proteins and fat in the body. Thus, they are intimately involved in the mechanism which releases energy, carbon dioxide and water as the end products of metabolism. Vitamin types, name and years of discovery are as follows:

Fat soluble

Vitamin A (Retinol) (1913) • Action: Right vision, epithelial function, antioxidant • Defi-

ciency: Night blindness, poor growth, rough dry skin and less resistance to infection, (xerophthalmia, perifollicular, hyperkeratosis) • Overdosage: Raised intracranial pressure, liver damage, skin changes • Daily dosage: 1 mg; Sources: Animal foods -liver, fish, egg yolk, milk, ghee, cheese, butter and as carotene in dark green leafy vegetables carrot, pumpkin, papaya, mangoes, Red palm oil.

Vitamin D (1925) • Action: VitaminD₂, Calcium, VitaminD₃ Metabolism • Deficiency: Rickets in children, osteomalacia and osteoporosis in adults • Overdosage: Hypercalcaemia • Daily dosage: 3mcg; Sources: Exposure to sun light, milk, butter, cheese, egg yolk, fish liver oils.

Vitamin E (Tocopherols) (1936) • Action: Red cell function, antioxidant • Deficiency: Mild haemolytic neuropathy in children, thought to interfere with reproduction, liver damage, abortion, haemorrhage • Daily dosage: 10mg; Sources: All vegetable oils, wheat-germ, egg yolk, butter, peas.

Vitamin K (1935) • Action: Synthesis of clotting factors (II, VII, IX, X) • Deficiency: Bleeding, liver damage, increased tendency to haemorrhage • Daily dosage: 100mcg; Sources: Green leafy vegetables, liver, pulses, also synthesised by colonic bacteria.

Water Soluble

Vitamin B₁ (Thiamine) (1936) • Action: Carbohydrate metabolism • Deficiency: Beri-beri, peripheral neuropathy, Wernicke-Korsakoff syndrome • Daily dosage: 1mg; Sources: Cereals, sprouts, green leafy vegetables, liver, pork, legumes.

Vitamin B₂ (Riboflavin) (1935) • Action: Cellular oxidation • Deficiency: Angular stomatitis, cheilosis • Daily dosage: 1.5mg; Sources: Liver, meat, eggs, kidney, milk and other dairy products, green leafy vegetables, sprouted cereals and pulses.

Nicotinic Acid / Nicotinamide • Action: Cellular oxidation decarboxylation • Defi-

ciency: Pellagra • Overdosage: Flushing • Daily dosage: 15-20mg; Sources: Liver, pulses, whole cereals, fish, meat, milk, eggs, groundnut, coffee.

Vitamin B₆ Pyridoxine (1934) • Action: Transamination • Deficiency: Peripheral neuropathy • Daily dosage: 3mg; Sources: Yeast, liver, meat, whole grain, cereals, groundnuts, banana, legumes.

Folic-acid (Folate) • Action: Haemopoiesis • Deficiency: Megaloblastic anaemia • Daily dosage: 200mcg; Sources: Yeast, liver, nuts, green vegetables, chocolate.

Vitamin B₁₂ (Cobalamin) (1948) • Action: Haemopoiesis • Deficiency: Megaloblastic anaemia subacute combined degeneration of the spinal cord • Daily dosage: 3mcg; Sources: Meat, liver, egg, dairy products, yeast.

Vitamin C (Ascorbic) (1919) • Action: Collagen synthesis antioxidant • Deficiency: Scurvy, sore mouth and gums, delayed healing, capillary bleeding • Overdosage: Raised urinary oxalate and urate • Daily dosage: 30-60mg; Sources: Citrus fruits, green leafy vegetables, germinated pulses.

Vitamin P is found in all sources of Vitamin C like orange, lemons, etc.

Other vitamins in the B complex include: Nicotinic acid, Pantothenic acid, Folic acid, Biotin, Lipoic acid, Choline and Inositol

A large number of minerals are present in the body and perform a variety of functions. Minerals account for about 4 % of the body weight. Calcium and phosphorus form about three-fourths of the mineral elements. Five other minerals—potassium, sulphur, sodium, chlorine and magnesium—account for most of the rest. Many elements are present in such minute quantities that they are called trace elements or micro-nutrients.

Water is a vital constituent of diet. An average man contains about 45 litres of water (70 % of the body weight). The cells contain 30 litres. Three litres are in the plasma of the blood, where the suspended cells make a

total volume of blood up to 5 litres. The remaining 12 litres (45-33) fill the space between groups of cells. This tissue fluid bathes all the cells of the body. Water is absolutely necessary for digestion and absorption of the foods taken in. It is the great solvent and neutraliser in the body. It is the substance in which bodily chemical reactions take place. Water is the carrier or transporting medium for all nutrients and body substances. It regulates body temperature, keeps skin fresh, and acts as great purifying agent in the body that removes waste materials in the form of tear, perspiration, urine and faeces. Watery substances act as lubricants in the body, especially in the joints. It is a part of all body tissues and fluids.

Acidosis, alkalosis and dehydration, pedema, fever, shock, uraemia and constipation are some of the clinical signs of inadequate salt and water in the body.

The body obtains water mainly from the fluids we drink, from the solids we eat and also from the oxidation of energy foods. Fats and carbohydrates are oxidised in the body to carbon dioxide and water.

Cereals like rice, wheat and millets, ragi, cholam and bajra form the main food in India. Cereals are rich in carbohydrates. They generally contain 6 to 12% protein, but these proteins are usually deficient in the essential amino acid lysine. Rice protein, however, is richer in lysine than other cereals. Most cereal grains are poor in mineral content and rice is especially poor. Ragi is, however, rich in minerals, especially in calcium, and bajra in iron. Whole cereal grains are important sources of B-vitamins but in milling, rice loses the outer layers containing thiamine. Parboiled rice, even when milled, does not lose its thiamine content. Except yellow maize, which contains some amounts of carotene, no other cereal grain is a source of vitamin A or C.

Pulses or legumes as they are called, are rich in proteins. Pulse proteins are of relatively low

biological value because of the deficiency of the essential amino acid methionine but they are rich in lysine. Pulses are not rich sources of minerals but they are rich in B-vitamins. Dried pulses do not contain vitamin C but if they are germinated significant amounts of vitamin C are generated. Most of the green leafy vegetables are rich sources of calcium, iron, carotene, vitamin C, riboflavin and folic acid.

Fibre: The portion of plant foods that our bodies cannot digest is known as fibre. There are 2 basic types : insoluble (roughage) and soluble. Insoluble fibres help move food materials through the digestive tract while soluble tend to slow them down. Both types absorb water, thus prevent and treat constipation by softening and increasing bulk of the undigested food components passing through the digestive tract. Soluble fibres are reported to be helpful in reducing blood cholesterol. Fibre is recommended for all age groups: men 40-50 gms/day, women 25, and old 20-30. Source: beans, bran, fruits, whole grain and vegetables.

Roots and tubers: are rich in carbohydrates. But roots like carrot are also rich in carotene (Vitamin A); Those like potato contain significant amounts of vitamin C, while roots like tapioca contain calcium also. Other vegetables are those which do not fall into the category of leafy vegetables or root vegetables. These vegetables are shoots, like lady's finger, cucumber, tomato, bitter melon, snake melon, brinjal, etc. They are fairly good sources of vitamins and minerals.

Nuts and oil seeds are good sources of fat (oil), protein and minerals and fair sources of vitamins: e.g. groundnut and cashewnut.

Fruits in general are rich in vitamin C, such as gooseberry, guava and citrus fruits. Yellow fruits like mango and papaya contain carotene and dried fruits like dates are sources of iron.

Fish and sea foods are rich sources of protein, B-vitamins and minerals, esp. calcium. Fleshy foods are rich sources of protein

and B-vitamins, especially B₁₂. They are generally deficient in vitamin A, but liver is an exception.

Egg is a rich source of all nutrients except vitamin C. Its protein is of high quality.

Milk and Milk products. Milk is an ideal food for infants and young children and a good supplementary food for all. It contains all vital nutrients, except vitamin C and iron.

Food is the only source of energy for humans. Our dietary sheet must change accordingly to our requirements of energy and meals planned. Food energy is measured in terms of heat units called calories. A physiological calorie, also called large calorie or

kilocalorie (abbreviated as Kcal), is the amount of heat necessary to raise the temperature of one kilogram of water by one degree centigrade. One gram of protein or carbohydrate yields 4 calories. One gram of fat yields 9 calories while the same quantity of alcohol yields 7 calories.

Foodstuff by category

Food Group-1: (a) CEREALS (b) STARCHY VEGETABLES (c) FATS AND OILS (d) SUGAR: jaggery, cane-sugar etc.

Food Group-2: (a) MILK (b) PULSES

Food Group-3: (a) FRUITS (b) Green LEAFY VEGETABLES . (c) Other VEGETABLES ■

Eat less, live longer

Dieting may not actually make you live longer, but it surely makes you feel that way. Nevertheless, evidence has been accumulating since the 1930s that calorie restriction—reducing an animal's energy intake below its energy expenditure—extends lifespan and delays the onset of age-related diseases in rats, dogs, fish and monkeys. Such results have inspired thousands of people to put up with constant hunger in the hope of living longer, healthier lives. They have also led to a search for drugs that mimic the effects of calorie restriction without the pain of going on an actual diet.

It is easy, amidst the hype, to forget that no one has until now shown that calorie restriction works in humans. That omission, however, changed with the publication of the initial results of the first systematic investigation into the matter. This study, known as CALERIE (Comprehensive Assessment of Long-term Effects of Reducing Intake of Energy), sponsored by America's National Institutes of Health, took 48 men and women aged between 25 and 50 and assigned them randomly to either a control

group or a calorie-restriction regime. Those in the second group were required to cut their calorie intake for six months to 75% of that needed to maintain their weight. The CALERIE study is a landmark in the history of the field, because its subjects were either of normal weight or only slightly overweight. At a molecular level, CALERIE suggests these advantages are real. They showed drops in body temperature and blood-insulin levels—both phenomena that have been seen in long-lived, calorie-restricted animals. They also suffered less oxidative damage to their DNA.

The search for a drug that will stave off old age is itself very old. Scientists are trying to find a drug that will mimick the effect of calorie restriction. There is a family of enzymes called sirtuins, which act both as sensors of nutrient availability and as regulators of metabolic rate. These might provide the necessary biochemical link between starving and living longer. Some plant-derived molecules are known to activate sirtuins in yeast. One of these molecules, resveratrol, has increased the maximum lifespan of a small fish by 65%. However, some of these molecules are already in clinical trials for cancer.

Managing free radicals

Research has now proved that oxidation in the body cells (the process by which we are continuously burning our calories to get energy) releases dangerous, very active molecules known as free radicals. These free radicals attack neighbouring cells (the cell walls, and genetic material-DNA, within the cells) and over a long time period, can cause irreversible damage like mutation and sometimes cause disease like cancer. Generally it manifests old age symptoms like lack of energy, poor memory, loss of hearing and falling hair, which are definitely associated with damaged or weak cells. Free radicals, in alcoholics, cause alcohol-induced liver damage, perhaps more than alcohol itself. Free radicals in cigarette smoke have been implicated in inactivation of alpha-1 antitrypsin in the lung, which promotes the development of emphysema and it is now proved that these free radicals are the main culprit. While nature has created this problem, it has provided the solution as well.

The presence of compounds, called Antioxidants, in the system can "mop up" free radicals before they damage other essential molecules. An antioxidant is a chemical that prevents the oxidation of other chemicals. Consuming more antioxidants helps provide the body with tools to neutralise harmful free radicals. It's estimated that there are more than 4,000 compounds in foods that act as antioxidants. The most studied include vitamins C and E, beta-carotene and the mineral selenium. Besides antioxidants, there are several enzyme systems within the body that scavenge free radicals. Additionally, selenium, a trace metal that is required for proper function of one of the body's antioxidant enzyme systems, is sometimes included in this

category. The body cannot manufacture these micronutrients so they must be supplied in the diet. The following vitamins have shown positive antioxidant effects: Vitamin A or Retinol, or beta-carotene found in carrots, squash, sweet potatoes, tomatoes, peaches and apricots are particularly rich sources of beta-carotene; Vitamin C also called ascorbic acid found in citrus fruits, green peppers, green leafy vegetables, strawberries, raw cabbage, tomatoes and potatoes; Vitamin E is found in wheat germ, nuts, seeds, whole grains, green leafy vegetables, vegetable oil and fish-liver oil; and selenium found in fish, shellfish, red meat, grains, eggs, chicken and garlic. Vegetables can also be a good source if grown in selenium-rich soils.

Natural Sources of Antioxidants

The colourful stuff: carrots, apples, oranges, tomatoes (cooked), beet root, brinjal, dark green vegetables, olives, strawberries, honey (the darker the better) and so on.

The tasty stuff: garlic, ginger, onion, nutmeg.

The smelly stuff: Tea, green tea, spinach, tulsi and other herbs etc. Usually, the body's natural defence systems neutralise free radicals that develop, rendering them harmless. However, environmental assaults on the body, like UV-radiation, pollutants and alcohol, can overpower the body's ability to neutralise free radicals, damage the structure and function of the body's cells. There is good evidence that this damage contributes to aging and leads to a host of illnesses, including cancer, arthritis, and heart disease. A regular exercise and eating more fruits or vegetables will vitalise inherent antioxidant systems and that your diet is providing the necessary components. ■

Human Body

The human body is a very complicated system consisting of millions of cells-organised uniquely and functioning dynamically together. The complexities can be better understood when it is highlighted. Anatomists find it useful to divide the human body into eight systems: the skeleton, the muscles, the circulatory and respiratory systems, the digestive system, the urinary system, the glandular system, the nervous system, and the skin.

Body Statistics

The body: has about 6.096 metres of small intestine and six of large, with a surface area of more than 9.29 sqm, or five times the area of the body's skin. The intestines process, at about 2.54 cm per minute, 40.64 metric tonnes of food over the course of 70 years.

Skin: 2.72 kg of skin cover the 1.85 sq.m of surface on an average adult.

DNA: Deoxyribonucleic acid, a nucleic acid, is the vital constituent of chromosomes, responsible for transmitting genetic information, in the form of genes, from parents to offsprings. Each human cell contains about 2 metres of DNA supercoiled on itself such that it fits within the cell nucleus less than 10 micrometers. DNA comprise 4 bases adenine-A, guanine-G, thymine-T, and cytosine-C, a sugar and phosphoric acid, organised in a double helix format. Within this format, A pairs only with T, and G only with C.

Bones in the body: Babies are born with over 300 bones. Many of them fuse together as we grow up - and we end up with about 206. The longest bone: The 'femur' or the thigh bone (1/4 of your height). The smallest

bone: The stapes or the stirrup-bone in the middle ear - few millimetres. The strongest bone: The shin bone, which connects the knee to the ankle. It can support 1,600 kg. More than half of an adult's 206 bones are in the hands and feet. There are 27 bones in each hand and 26 in each foot - for a total of 106.

Composition of Bones: Organic Matter 33.30%; Phosphate of Lime 51.04%; Carbonate of Lime 11.30%; Fluoride of Calcium 2.00%; Phosphate of Magnesia 1.16%; Soda/Chloride of Sodium 1.00%.

Human Brain: Consists of two parts: the brain located in the skull and the spinal cord located in the vertebral column.

Central Nervous System: The brain along with spinal cord constitutes the Nervous system. The brain consists of

(i) *Cerebrum*: The largest part of the brain consisting of two hemispheres which control voluntary actions and are the seat of intelligence, memory association, imagination and will. (ii) *Cerebellum*: The large mass having ridges and furrows attached to, cerebrum, which regulates muscular movement of locomotion. (iii) *Medulla Oblongata*: The lowermost part of the brain which continues as the spinal cord in the vertebral columns. It controls involuntary actions.

The weight of the average human brain triples between birth and adulthood. The final weight of the brain in an adult male is about 1.4 kg (and 1.3 kg in the case of a woman) which averages about 3% of the body weight.

The brain uses about 20% of the oxygen a man breathes, 20% of calories a man takes in, and about 15% of body blood.

The brain stores information equal to 500,000 sets of the Encyclopedia Britannica. Given its compact size, efficient power consumption (equivalent to a 20-watt lightbulb) and massive storage capacity (100 trillion bits of information) it can work better than any computer. At a time our brain can retain 7 facts in the short-term memory. *Neurons* are the longest cells in our body- measures 1.2m long. Fully formed human brain contains 100 billion neurons, or nerve cells. When neuron fires off a message, it is received in one of the thousands of receptor sites in another neuron, which stops it or sends it on. Brain makes up only 2% of the body weight but uses 20% of the oxygen and blood supply.

Nerves 72,418km of nerves send impulses as rapidly as 360 km per hour. The fastest nerve impulse travels at 532 Kmph.

The heart 27949.3 litres of blood are pumped through 99,776.6 km of blood vessels in a day. The hollow muscle pumps enough blood in an average lifetime to fill the fuel tanks of 56 moon rockets. Unlike other muscles, its contractions are involuntary, beginning 4 weeks after conception, before nerve cells are formed, and continue to pulse even out of body in saline solution. Muscle cells called myocytes generate a total electrical current of about 2 watts that commands the fibres to contract. Shortly after birth, those cells stop dividing.

The Blood There are about 96,000 km of blood vessels in our body. The Blood comprise Plasma, RBC (red blood cells/erythrocytes), WBC (white Blood Cells/leukocytes) and Platelets (Thrombocytes).

Plasma is made up of 90% water, 7% proteins, and others like nutrients, salts, nitrogen waste, carbon-dioxide and hormones.

8,000,000 RBCs are produced in the bone marrow every second constituting 54% of hemoglobin and their count ranges between 4-6 million per cu mm.

WBC count normally ranges between 4,500 to 11,000 per cu mm

Platelets also normally count between 15,000 and 300,000 per cu mm

The lungs Man breaths 13- 17 times a minute at rest and 80 during exercise. On an average we breath 21600 times a day. We take in 295.261m litres in an average life span. The shock of birth causes the first breath. Muscle contract, opening the chest and lowering interior air pressure. The baby's mouth opens in protest, air rushes in, and the newborn begins to inhale about 60 times a minute, beginning the cycle of strife and breath. The adult human lungs have an internal area of 93 m², which is 40 times the external surface of the human body.

The liver Among some 1000 widely divergent functions, the liver regulates hormonal balance, cholesterol, blood clotting and poisons. The liver is the only organ that can regenerate; if as much as two thirds is removed, a whole liver can grow back.

The alimentary system is a 9.14 metre-long tube from mouth to anus that breaks down food into particles tiny enough to pass from intestines into the bloodstream. The nutrients are then routed to the largest gland in the body, the 1.36 kg liver, to be refined into chemical and warehoused until demand soars. Large intestine = 1.524m Small Intestine = 7.5m

Stomach: produces 2 litres of hydrochloric acid daily. 500,000 cells of stomach's inner walls are replaced every minute so that the acid does not damage the walls.

Muscles: There are 639 muscles which also account for 40% of the total body weight. The total number of muscles in the body: over 630. It takes 17 muscles to smile and 42 to stare. Largest muscle: The gluteus maximus or the buttock muscle. The smallest muscle: The stapedius muscle which controls the stapes.

The reproductive organs: A man's testes manufacture more sperm per second (about 2000) than a woman's ovaries produce eggs in a life time (about 400).

pipe (trachea) and two tubes called bronchi, to the lungs. Oxygen from the air is taken in by tiny blood vessels in the lungs. The blood then carries oxygen to the cells of the body.

Skeletal System: The skeletal system is made up of bones that hold your body upright. Some bones protect organs, like the ribs that cover the lungs.

Muscular System: Muscles are made up of elastic fibres. There are 3 types of muscle: skeletal, smooth and cardiac. The skeletal muscles help the body move. They are large muscles visible to our eyes. Smooth muscles are found in our digestive system, blood vessels, and air passages. Cardiac muscle is found only in our heart. Smooth and Cardiac muscles are involuntary muscles - they do their job without us having to think about them.

Reproductive System: Through the reproductive system, adult human beings procreate. Reproduction begins when sperm cell from man fertilises an egg cell from a woman.

Urinary System: This system includes kidneys, which cleans waste from the blood and regulates the water in the body.

Immune System: The Immune System protects our body from diseases by fighting against certain substances that come from outside, or antigens. This happens in different ways. For example, WBC called B lymphocytes learn to fight certain viruses and bacteria by producing antibodies, which spread around the body to attack them. Sometimes

, as in allergies, the immune system makes a mistake and creates antibodies to fight a substance that's really harmless.

Glands of the Human Body

Glands are organs of the human body that manufacture some liquid products which are secreted from the cells. There are two types of glands: (i) **Ducted Glands** Ducted glands secrete their product through well-defined ducts, e.g., *Liver*—secretes bile in the stomach; *Lachrymal*—secretes tears in the eyes; *Salivary*—secretes saliva in the mouth; *Sweat glands* in the skin—secretes sweat. (ii) **Ductless Glands** Also called *endocrine* glands or internally secreting glands. They secrete hormones directly into the blood-stream in response to brain's instructions. Ductless glands and their functions: *Thymus*: In early childhood it plays some part in building resistance to diseases and physical development; *Thyroid*: Regulates metabolism

Prostrate: Regulates blood pressure and sexual potency; *Gonads* : Relates to reproductive system and secretes sex hormones; *Adrenal*: Causes acceleration of the breath, heightens emotion and a sudden increase in physical strength during fear or anger; *Pancreas*: Aids in digestion of proteins, carbohydrates and fats; it secretes insulin and deficiency of insulin causes diabetes; *Pituitary*: Called the master gland as it controls the other ductless glands and influences growth and metabolism.

Ready-to-eat fruit

We are health conscious but poor in keeping with time. Grab a pack of packaged ready-to-eat fruit and your body will be none the wiser.

That's the message from new international research showing that chilled, ready-to-eat, fresh-cut fruit retains

high levels of vitamin C and other antioxidants.

According to a science report in the *Journal of Agricultural and Food Chemistry*, cutting and packaging fruit has almost no effect on the main antioxidants. In fact, levels of some antioxidants increased in selected chilled fruits.

Human Disease

A disease is a condition that impairs the proper function of the body or of one of its parts. Every living thing, both plants and animals, can succumb to disease. Hundreds of different diseases exist. Each has its own particular set of symptoms and signs, clues that enable a physician to diagnose the problem. A symptom is something a patient can detect, such as fever, bleeding, or pain. A sign is something a doctor can detect, such as a swollen blood vessel or an enlarged internal body organ. Every disease has a cause, although the causes of some remain to be discovered. Every disease also displays a cycle of onset, or beginning, course, or time span of affliction, and end, when it disappears or it partially disables or kills its victim. An epidemic disease is one that strikes many persons in a community. When it strikes the same region year after year it is an endemic disease. An acute disease has a quick onset and runs a short course. A chronic disease has a slow onset and runs a sometimes years-long course. The gradual onset and long course of rheumatic fever makes it a chronic ailment.

Kinds of Disease

Infectious (communicable) diseases are those that can be passed between persons such as by means of airborne droplets from a cough or sneeze. Tiny organisms such as viruses, bacteria, fungi and worms can produce infectious diseases. Whatever the causative agent, it survives in the person it infects and is passed on to another. Sometimes, a disease-producing organism gets into a person who shows no symptoms of the disease. The asymptomatic carrier can then pass the

disease on to someone else without even knowing he has it.

Non-infectious (non-communicable) diseases are caused by malfunctions of the body. These include organ or tissue degeneration, erratic cell growth, and faulty blood formation and flow. Also included are disturbances of the stomach and intestine, the endocrine system, and the urinary and reproductive systems. Some diseases can be caused by diet deficiencies, lapses in the body's defense system, or a poorly operating nervous system.

Deficiency diseases: due to deficiency in the diet of nutrients. They can generally be cured by providing the missing nutrients.

(a) *Protein deficiency* causes two major diseases Kwashiorkor and Marasmus.

(b) *Mineral deficiency* causes specific diseases. (i) *Anaemia: Iron deficiency* causes haemoglobin deficiency in blood. (ii) *Goitre: Iodine deficiency* causing no synthesis of thyroxine hormone of thyroid gland). (iii) *Hypokalemia: potassium deficiency*. (iv) *Hyponatremia: sodium deficiency* causes this state of low blood pressure and loss of body weight.

(c) *Vitamin deficiency* causes a variety of diseases. (i) Night Blindness: (Vitamin A). (ii) Xerophthalmia: (dryness of eye due to lack of Vitamin A). (iii) Dermatitis: (Vitamin A). (iv) Beri-beri: (Vitamin B—thiamine). (v) Ariboflavinosis: (Vitamin B₂—riboflavin). (vi) Pellagra: (nicotinic acid/ niacin—part of B complex group). (vii) Pernicious Anaemia: (Vitamin B₁₂—Cobalamin). (viii) Scurvy: (Vitamin C—ascorbic acid). (ix) Rickets: (a disease causing disorder of calcium and phosphorus metabolism due to Vitamin D deficiency, often found

in the early childhood: 6 months and 2 years.

(x) Osteomalacia: (Vitamin D).

Infectious diseases are caused by various agents such as virus, bacteria, fungi and protozoa. (a) Diseases caused by Bacteria: Cholera, Diphtheria, Tuberculosis, Leprosy, Tetanus, Typhoid, Plague, Whooping Cough, Sore Throat, Pneumonia, Bacillar dysentery, Gonorrhea, Syphilis and Botulism. (b) Diseases caused by Viruses: Chickenpox, Measles, Poliomyelitis, Rabies, Mumps, Influenza, Hepatitis, Herpes, Viral Encephalitis and AIDS. (c) Diseases caused by Fungi: Ringworm, Athlete's foot, Dhobie itch. (d) Diseases caused by protozoans: Amoebiasis, Malaria, Sleeping sickness, Kalaazar, Diarrhoea, (e) Diseases caused by Helminthes or Worms: Filaria, Tape-worm and Hookworm transmission.

Degenerative diseases occur due to malfunctioning of some organ or organ system in the body. They are: Heart Attack, Diabetes mellitus, Arthritis.

Sexually Transmitted Diseases (STD)

| Disease | Causative organism |
|----------------------|---------------------------------|
| Gonorrhoea | <i>Neisseria gonorrhoeae</i> |
| Syphilis | <i>Treponema pallidum</i> |
| Chancroid | <i>Haemophilus ducreyi</i> |
| Granuloma inguinale | <i>Donovania granulomatis</i> |
| Trichomoniasis | <i>Trichomonas vaginalis</i> |
| Candidiasis | <i>Candida albicans</i> |
| Chlamydiasis | <i>Chlamydia trachomatis</i> |
| H.V. Vaginitis | <i>Haemophilus vaginalis</i> |
| Genital herpes | <i>hominis type II (HSV II)</i> |
| Condyloma acuminatum | Papova group virus |
| Scabies | <i>Sarcoptes scabiei</i> |
| Pediculosis pubis | <i>Phthirus pubis</i> |

Bacterial Diseases

| Disease | Causative agent |
|---------|---------------------------|
| Typhoid | <i>Salmonella typhosa</i> |
| Tetanus | <i>Clostridium tetani</i> |

| | |
|----------------|------------------------------------|
| Cholera | <i>Vibrio cholerae</i> |
| Syphilis | <i>Treponema pallidum</i> |
| Pneumonia | <i>Diplococcus pneumoniae</i> |
| Gonorrhoea | <i>Neisseria gonorrhoeae</i> |
| Leprosy | <i>Mycobacterium leprae</i> |
| Plague | <i>Mycobacterium tuberculosis</i> |
| Whooping cough | <i>Bordetella pertussis</i> |
| Meningitis | <i>Meningococcus</i> |
| Diphtheria | <i>Corynebacterium diphtheriae</i> |

Viral Diseases

Disease and causative agent: *Acquired Immuno Deficiency Syndrome (AIDS)*: Human immunodeficiency virus (HIV)

Chicken pox: Varicella herpes virus; *Influenza*: Orthomyxovirus; *Measles (Rubeola)*: Paramyxovirus; *Mumps*: Paramyxovirus; *German Measles*: Togavirus; *Poliomyelitis*: Enterovirus; *Rabies*: Rhabdovirus.

Disease of Eye

Name of disease and symptoms: *Astigmatism*: Visual activity is decreased, eye strain causes headache, cylindrical lens should be used.

Cataract: Normal vision is hampered, blindness may be caused. Lens is removed and artificial lens is used.

Glaucoma: Aqueous humour pressure increases. It may cause blindness.

Hypermetropia (far sightedness): Distant objects can be seen clearly, near objects can't be seen clearly. Image formed behind retina. Biconvex lens should be used.

Strabismus (Squint): Eye ball turns to any of the sides.

Trachoma: Redness in the eye, sensation for foreign body in eye.

Cancer

Cancer is a general term used to describe over 200 individual diseases. These diseases progress differently over a period of time but share certain characteristics that include development within any tissue of a malignant

growth derived from abnormalities of the host. The abnormal cells grow without any control, invade through normal tissue barriers, spread to local and distant sites within the host, and reproduce indefinitely.

Sometimes, cancer cells do not remain confined to one part of the body and penetrate and infiltrate into the adjoining tissues and dislocate their functions. Some of the cancer cells get detached from the main site of origin and travel by blood and lymph to sites distant from the original tumour and form fresh colonies, called metastasis or secondary growth. Cell which undergo rapid, abnormal and uncontrolled growth are called neoplastic cells. The growth resulting from the division of such cells are called as neoplastic growth or tumours.

Tumours are commonly classified as: (i) Benign tumours : Abnormal and persistent cell division that remains localised at the spot of origin results in the benign tumours. In some cases it can be fatal. (ii) Malignant Tumour : It first grows slowly and this state is called the latent state. The tumour later grows quickly. The cancer cells go beyond adjacent tissue and enter the blood and lymph. Once this happens, they migrate to many other sites in the body where the cancer cells continue to divide. It is metastasis.

The masses of such abnormal cells formed and spread in this way lead to the death of the host if not eradicated. The incidence of cancer is rising steadily.

Diagnosis: The diagnosis of cancer is required to be confirmed either by a histopathological examination of a biopsy of fine needle aspiration cytology, firstly, to determine the extent of tumour and secondly to determine whether the tumour has metastasized to other sites. Using blood tests, x-ray studies, radio-nuclide scans, C.T. Scans and M.R.I. Scans, the cancer is staged according to staging systems—the T.N.M. system being widely used.

Treatment: Cancer treatment consists of

Father of Chemotherapy

Paul Ehrlich was born on March 14, 1854, in a respected Jewish distiller's household, in Germany. Ehrlich studied medicine at the Universities of Breslau, Strasbourg, and he graduated from Leipzig, in 1878. While still a student, he began investigations on the aniline dyes used in the distillery. With its aid, he discovered all the different types of white blood corpuscles.

Ehrlich always had the idea of creating substances that would exert their full action exclusively on the parasite harboured within the organism like 'magic bullets' which seek their target of their own accord. In April 1910, Ehrlich announced before the Congress for Internal Medicine at Wiesbaden, that a synthetic arsenical compound, which he named 'salvarsan' had shown curative properties in rabbit syphilis and also in clinical trials. It was first used in the treatment of human syphilis in 1911. Thus the science of chemotherapy was born.

In 1914, as a professor in the University of Frankfurt, Ehrlich explored the acidity of living tissues for certain dyes. In a remarkable monograph (1885), he reported his investigations into the distribution of oxygen in animal tissues and organs. Using two vital staining dyes, alizarin blue and indophenols blue, he demonstrated that while living protoplasm in general has potent reducing properties, bodily organs are classifiable according to their oxygen acidity. He enunciated the fundamental concept underlying his work: chemical affinities govern all biological proc

surgery, radiation therapy and systemic therapy using chemotherapy and hormones. These modalities may be used either singly or in combination. Developments and advances in Imaging, coupled with better understanding and knowledge of the natural history of various cancers have led to the era of multi-modality therapy which has changed the cancer treatment scenario.

Epidemiology: Estimates show that the number of new cancer cases in India is about 1,000,000 per year. The most common form of cancers seen in the males include cancers of the lung, stomach, oesophagus, mouth, larynx, hypopharynx, tongue, prostate, urinary bladder and body uterus.

In females, traditionally cancer of the cervix was the leading cancer, but of late, especially in the urban areas, cancer of the breast seems to be becoming a major problem. Cancers of the mouth are commonly seen in both the males and the females. Cancers of the larynx, hypopharynx, oesophagus and stomach are seen more in men than in females, while cancer of the gall bladder is seen more often in women.

Breast Cancer is becoming a common disease all over the world. It occurs to women and men. But women are more vulnerable to it. The risk of Breast Cancer increases with aging in women. The risk is also higher for women with a personal or family history; a long menstrual history; recent use of oral contraceptive or postmenopausal hormone replacement therapy; and no children or no live birth until age 30 or older. Other risk factors include alcohol consumption and obesity. Inherited mutations such as in the BRCA1 and BRCA2 genes greatly increase a woman's risk for Breast Cancer, but genetic factors account only for the 10% of the affected.

Physical symptoms include a breast lump and less commonly breast thickening, swelling, distortion or tenderness; skin irritation or

dimpling; or pain, scaliness, or retraction of nipple. Breast pain is more commonly associated with benign conditions. The treatment include lumpectomy, mastectomy, radiation therapy, chemotherapy, hormone therapy, immunotherapy, or some combination of these. Various drugs are also available now a days. Early detection gives lot more chance of survival.

AIDS

The Acquired Immuno Deficiency Syndrome (AIDS) is caused by Human Immuno Deficiency Virus (HIV) which attacks human immune system, esp. lymphocytes. HIV is transmitted through blood and blood products, seminal and vaginal fluids, unprotected sex, infected blood transfusion, contaminated needles, artificial insemination, child birth to infected parents, etc. It however, does not spread by kissing, coughing, mosquito bites, food, water, working together, etc. Symptoms could be rapid weight loss, chronic diarrhoea, prolonged fever, persistent cough, herpes zoster infection, etc.

Tests like Enzyme Linked Immuno Sorbent Assay or ELISA kit, Particle Agglutination Test (PAT), Immuno Fluorescent Assay (IFA), Radio Immuno Precipitation Assay (RIPA), HIV test, etc. are used to detect cases. In India, there are about 5.3 m infected people. Maharashtra, Manipur, and Tamil Nadu have comparatively more number of cases.

SCID

(Severe Combined Immune Deficiency): It is a congenital Immunodeficiency disorder in which lymphocytes are not formed and the patient dies of even minor infection. Such children can survive only in germ free isolation chambers.

Osteoporosis

Osteoporosis, literally meaning 'porous bones, constitute the hardest part of the human body. According to experts, os-

oporosis is just not calcium deficiency. It is a combination of the loss of the organic matter in the bone, which gives it elasticity, and the inorganic matter, made up of substances such as calcium and phosphorous, which gives it strength. In the early stages osteoporosis is painless and hence it is often called the "silent disease". Since the genetic make-up is the main factor behind the disease, some people are more likely to develop osteoporosis than others. Over 300 million people suffer from osteoporosis in India without realising that every osteoporosis-related bone fracture doubles the risk of death.

What causes osteoporosis? Calcium plays an important role in transmitting signals to nerves and muscles and is therefore important in regulating the heart rate, muscle contractions, blood pressure and other bodily functions. To keep these functions regulated, the calcium in the blood must be maintained at a certain level. When it drops to a very low level, the body replenishes it with calcium from the bone - a living and growing tissue composed of a network of collagen fibres inlaid with calcium and phosphate. 'Resorption', the process of releasing calcium from bones into the blood, results in the breakdown of bones. By another process called 'formation', the bones get rebuilt. Together, the processes constitute bone remodelling. The continuous remodelling cycle serves to supply the body with the calcium it needs and maintains the skeletal structure and strengthens it by replacing old bones with new ones. When formation exceeds resorption, the bone mass increases. When resorption increases, it results in loss of bone mass. Continued excessive bone loss leads to osteoporosis. Bone fracture is the biggest risk for osteoporosis patients. Any bone can be affected, but the most serious ones are fractures of the hip and the spine.

In India, the incidence is higher - one in four women and one in eight men get os-

teoporosis before the age of 50. More women die of osteoporosis fractures than of breast and ovarian cancers put together. Unfortunately, osteoporosis shows no symptom and is often diagnosed only after a fracture, by which time the patient may have suffered considerable bone loss.

Hepatitis

Hepatitis is caused by virus. These viruses are of six types, called A, B, C, D, E and G respectively. Out of these, the A and E types are found in water. All other are transmitted through blood. In India, the B and C types of viruses are prominent.

TB Epidemic

India accounts for about 33% of the global burden of tuberculosis. The disease is one of India's most important public health problems. Every day in India more than 20,000 people become infected with the tubercle bacillus, more than 5,000 develop the disease, and over 1000 die from TB. In India, tuberculosis kills 14 times more people than all tropical diseases combined, 21 times more than malaria, and 400 times more than leprosy. Every year, nearly 20 lakh people develop tuberculosis in India, nearly one million of them highly infectious sputum - positive cases. Two such cases develop every minute.

Every sputum-positive patient can infect 10-15 individuals in a year. Tuberculosis also kills more women than all causes of maternal mortality combined. HIV and multidrug-resistant TB threaten to make this situation even worse. Unless urgent action is taken, more than 40 lakh people in India will die of tuberculosis in the next decade.

Combating TB India has long been at the forefront of the global battle against tuberculosis. Pioneering studies at the Tuberculosis Research Centre, Chennai and the National Tuberculosis Institute, Bangalore established the principles of tuberculosis control which

gling/ numbness in hands or feet • recurring skin, gum or bladder infections.

Diabetes cases worldwide are estimated to be more than 150 million. WHO predicts it to double by 2025 to reach 300 million. Developing regions, particularly Asia and Africa are expected to bare the burnt of the increase. Most alarming, however, is the spread of diabetes across age barrier, especially among the teenagers is extremely worrying. Diabetes is a chronic disease in which the body does not produce or properly use insulin, a hormone needed to convert sugar, starches, and other foods into energy necessary for daily life. Both genetics and environment appear to play roles in the onset of diabetes.

Guidelines for diagnosing diabetes: lowering the acceptable level of blood sugar from 140 mg. of glucose/deciliter of blood, to 126 mg/deciliter; testing all adults 45 years +, and then every 3 years if normal; and testing at a young age, or more frequently, in high-risk individuals. Detection at an earlier stage will help prevent or delay complications of diabetes.

Type I (formerly known as insulin dependent)–The body produces very little or no insulin; disease most often begins in childhood or early adulthood. People with type 1 diabetes must take daily insulin injections to stay alive.

Type II (formerly known as non-insulin dependent)–The body does not produce enough or cannot properly use insulin. It is the most common form of the disease (90-95% of cases in people over age 20) and often begins later in life.

Complications of Diabetes More than half of all individuals with diabetes do not know that they have the disease until one of its life-threatening complications occurs. Potential complications include:

Blindness diabetes is the leading cause of blindness in people ages 20-74. Each year, many people lose their sight because of diabetes.

Kidney disease 10% to 21% of all people with diabetes develop kidney disease.

Amputations Diabetes is the most frequent cause of nontraumatic lower limb amputations. The risk of a leg amputation is 15 to 40 times greater for a person with diabetes.

Heart disease and stroke People with diabetes are 2 to 4 times more likely to have heart disease. And they are 2 to 4 times more likely to suffer a stroke.

Alzheimer's disease

Experts observe that an estimated 12 million people are suffering from Alzheimer's disease worldwide. And as the population grows and people live longer, those numbers will explode more than 3 fold by the year 2050. Alzheimer's disease is a progressive, degenerative disease of the brain in which brain cells die and are not replaced.

Alzheimer's disease results in impaired memory, thinking, and behavior, and is the most-common form of dementing illness. The debilitating nature of the disease renders patients susceptible to infections (such as pneumonia and urinary tract infections) as they become emaciated, incontinent, immobile, or enter a persistent vegetative state. It strikes equally among men and women of all races. Although most people diagnosed with Alzheimer's are older than age 60, the disease can occur in people in their 40s and 50s. Ten percent of those 65 years of age or older, and almost half of those over age 85, have the disease. The rate of the progression of Alzheimer's disease from the onset of symptoms until death ranges from 3 to 20 years; the average is 8 years. Eventually, patients become totally incapable of caring for themselves.

Diagnosis is complicated by the lack of a single, simple test to identify the disease. Through a series of diagnostic tests by a qualified physician, possible causes of symptoms, such as depression, drug interactions,

nutrient imbalances, or other forms of dementia—such as those associated with stroke, can be identified. Huntington's disease, Parkinson's disease, Pick's disease, and infections (AIDS, meningitis, syphilis) are ruled out, yielding a diagnosis of Alzheimer's disease that is 80-90% accurate. A definitive diagnosis is possible only with a brain biopsy or an autopsy.

No treatment has proven successful in reversing the course of the disease, and providing care for patients with Alzheimer's disease is very physically and psychologically demanding. Nearly 70% of those afflicted need to be cared for in a nursing home. People with Alzheimer's disease need a safe, stable environment and a regular daily schedule. Physical exercise and social activity are important, as is proper nutrition. A bracelet identifying the person's name and condition may be helpful in case the person wanders away. The causes of Alzheimer's disease are unknown. *Warning signs:* Recent memory loss that affects job performance; Inability to learn new information; Difficulty with everyday tasks such as cooking or dressing oneself; Inability to remember simple words; Use of inappropriate words when communicating; Disorientation of time and place; Poor or decreased judgment; Problems with abstract thinking; Misplacing objects in inappropriate places; Rapid changes in mood or behavior; Increased irritability, anxiety, depression, confusion, and restlessness; Prolonged loss of initiative.

Blood Vessel Disease

Cholesterol A blood cholesterol level over 240 mg/dl (milligrams of cholesterol per deciliter of blood) approximately doubles the risk of coronary heart disease. Blood cholesterol levels between 200 and 240 mg/dl are in a zone of moderate and increasing risk. An estimated 6.5 mil (10.8% of) youths age 4-19 have levels of 200 mg/dl or higher.

Blood Pressure

High blood pressure, or hypertension, affects people of all races, sexes, ethnic origins, and ages. Various causes can trigger this often symptomless disease. Since hypertension can increase one's risk for stroke, heart attack, kidney failure, and congestive heart failure, it is recommended that individuals have a blood pressure reading at least once every 2 years (more often if advised by a physician). A blood pressure reading is really two measurements in one, with one written over the other, such as 122/78. The upper number (systolic pressure) represents the amount of pressure in the blood vessels when the heart contracts (beats) and pushes blood through the circulatory system. The lower number (diastolic pressure) represents the pressure in the blood vessels between beats, when the heart is resting. According to health guidelines, normal blood pressure is below 130/85 and "high normal" is between 130/85 and 139/89.

High blood pressure is divided into 4 stages, based on severity: Stage 1 (mild) high blood pressure ranges from 140/90 to 159/99; Stage 2 (moderate) is from 160/100 to 179/109; Stage 3 (severe) is from 180/110 to 209/119; Stage 4 (very severe) is 210/120 and up.

The diagnosis of hypertension can be based on either the systolic or the diastolic reading. High blood pressure usually cannot be cured, but it can be controlled in a variety of ways, including lifestyle modifications and medication. Treatment should be at the direction and under the supervision of a physician.

Hypertension

Hypertension, is the commonest cardiovascular disease, predisposes to heart attack, heart failure, stroke, kidney failure etc.

Two values are recorded — one above (numerator) is called systolic pressure and the one recorded below (denominator) is the diastolic pressure. Upper limit of normal blood

pressure for an adult is 139/89; when the value exceeds this limit (on multiple recordings — at least three) he/she is said to have the disease called hypertension (systemic hypertension is the correct term).

Warning Signs of Heart Attack: • Uncomfortable pressure, fullness, squeezing, or pain in the centre of chest lasting 2 minutes or longer • Pain may radiate to the shoulder, arm, neck, or jaw • Sweating may accompany pain or discomfort • Nausea and vomiting also may occur • Shortness of breath, dizziness, or fainting may accompany other signs.

Warning Signs of Stroke: • Sudden numbness or weakness of face, arm or leg, especially on one of the body • Sudden confusion, trouble speaking or understanding • Sudden trouble seeing in one or both eyes • Sudden trouble walking, dizziness, loss of balance or coordination • Sudden severe headache with no known cause.

Genetic Disorder

(i) **ABO incompatibility:** O group mothers don't possess antigen A or B but have anti-A and anti-B antibodies. A or B group foetus in O group invites antibodies of the mother causing partial destruction of RBCs and production of bilirubin (affecting the baby with mild anaemia and jaundice). Similarly, A-group foetus in B-group mother or B-group foetus in A-group mother is attacked by antibodies of mother. ABO hemolytic (RBC-destroying) disease of new born is quite common and less severe as compared to Rh-incompatibility). (ii) **Sickle Cell anaemia:** It is due to a recessive autosomal gene (Hbs) that causes abnormalities in haemoglobin resulting in sickle of RBCs-sickle cells (rigid sickle cells obstructing capillary blood flow). (iii) **Phenylketonuria** causes deficiency of an enzyme called phenylalanine hydroxylase in liver (characterised as mental retardation, hypopigmentation of skin and hair, eczema,

mousy odour of skin, hair and urine). (iv) **Haemophilia** a recessive trait that occurs due to absence of plasma thromboplastin or anti-haemophilia globulin. (v) **Red-Green Colour Blindness:** causes one unable to distinguish between red and green colour (predominantly in male), (vi) **Thalassemia** results from defective synthesis of sub-units of haemoglobin, (vii) **Downs' Syndrome** or Mongolian Idiocy is caused by trisomy of 21st autonomic chromosome having a total of 47 chromosomes instead of 46. It is characterised by round face, flattened nasal bridge, broad forehead, projecting lower lip, short neck, stubby fingers, etc.

Mental Illness

Psychosis: disease of CNS. It could also be related to diabetes, hypertension, and TB. In this case the patient is unaware of the illness and refuses treatment.

Epilepsy: Seizures characterised by abnormal electrical discharge in a part of brain. Symptoms: fits of convulsions (jerk, stiffness, tongue biting, sensory changes), cry, etc.

Neurosis: The patients show excessive reaction to given stress. It involves abnormal anxiety, fear, sadness, vague aches and pains.

Schizophrenia: It is characterised by disorganised personality (like auditory hallucinations, delusions, illogical thinking, and sense of being controlled by outside forces). Regular use of chlorpromazine and psychosocial therapy give lot of relief.

Medical Technology

A. Diagnostic Instruments: (i) **ECG** — electrocardiograph detects myoelectrical changes during cardiac cycle (sino-atrial block, etc.) detects valvular defects, etc. (ii) **Echocardiography:** a sonographic method of heart, heart vessels, valves, etc. (iii) **Electroencephalography (EEG)** — electroencephalograph records electrical activity from different parts of brain, epilepsy, brain tumour, etc.

fects on brain, sleep disorder, etc. (iv) *MET* – magneto encephalographic technique detects weak magnetic waves to find out the health of various parts of brain. (v) *Autoanalysers* are automatic computerised instruments that estimate different biochemicals present in body fluids like urea, cholesterol, glucose, proteins, enzymes, etc.

B. Imaging Instruments: (i) *Tomography* – creates 3D image of internal area through imaging of different layers. It detects cysts, calculi, cancer, etc. (ii) *CT Scanning* – an imaging method using invasive technique with low-level X-ray radiation. It detects disorder in abdomen, chest, spinal chord, internal haemorrhage, tumour, etc. (iii) *CAT scanning* – detects problems inside the skull and location of any pathological condition. (iv) *MRI* – magnetic resonance imaging uses

strong external magnetic field for mapping internal tissues, to highlight pathological changes and studying tissue metabolism. Imaging can be obtained from any plane. (vi) *Ultrasound* imaging is used to diagnose kidney stone, gall bladder stone, intestinal obstruction, fallopian tube, age, health, gender of foetus, etc.

C. Therapeutic Instruments (i) *Pace-maker* – regulates the heart beat. (It is affected by microwave-oven, metal detectors, electric shaver, cellular phone, automobile ignition, etc.) (ii) *Angioplasty* – used to open a blocked coronary artery vessel through ballooning. (iii) *Angiography* is a method of introducing radio-opaque contrast medium or fluoroscopic chemical through various parts of heart to study the health of walls, valves, ventricles, coronary arteries, etc. The progress could be filmed.

Euthanasia

The word *euthanasia* is derived from two Greek words (*eu*, well, and *thanatos*, death), which mean “a good death”. The term is usually used in a medical context. It is the practice of mercifully terminating life when a person is hopelessly ill or injured or without prospect of recovery in order to hasten the relief or death.

Modern advances in medicine and medical technology have made it increasingly possible for life to be prolonged. Prolonged hospitalisation or being bed-ridden for a long time causes lot of problems and inconveniences not only to the patient but to others too besides the escalating cost.

Dr. Kevorkian, better known as Dr. Death, a physician even created a machine

which let patients self-induce drugs that would end their life if they are terminally ill. The world, anyway is divided widely over the subject, where a few are out to give it a legal status while others ban it altogether.

Definitions:

It is the intentional killing by act or omission of a dependent human being for his or her alleged benefit. (The key word here is “intentional”. If death is not intended, it is not an act of euthanasia).

There are different categories in euthanasia – **Voluntary euthanasia** (when the person who is killed has requested to be killed); **Non-voluntary** (when the person who is killed made no request and gave no consent); **Involuntary**

euthanasia (when the person who is killed made an expressed wish to the contrary); assisted suicide (someone provides an individual with the information, guidance, and means to take his or her own life or when it is a doctor who helps another person to kill themselves it is called "physician assisted suicide."); Euthanasia By Action (intentionally causing a person's death giving a lethal injection); Euthanasia By Omission (intentionally causing death by not providing necessary and ordinary (usual and customary) care or food and water).

There is no euthanasia unless the death is intentionally caused by what was done or not done.

Reasons for :

1. Unbearable pain, 2. Suffering,
3. People should not be forced to stay alive, and 4. Demanding a "right to commit suicide" (Not applicable in India).

Arguments against :

Human life is very precious and it is not ethical to push one person to death. A person does not have any right to destroy life which he or she cannot create.

The act is against a moral man's conscience and rejection of the importance and value of human life

It would not only be for people who are "terminally ill"

It can become a means of health care cost containment

It will become non-voluntary

Mistakes can be made with regard to supposed incurable diseases. The disease may be incorrectly diagnosed or may be able to be survived or cured.

No law having to do with mercy killing would be able to account for every circumstance, and therefore would be either so complex as to make dying longer and less dignified, it would have so few controls that abuses would occur.

Stem Cell Therapy

Stem cells are building blocks of life. These versatile cells have the ability to grow into any kind of tissue-skin, heart, liver, or any other organ. These cells can be procured from embryos, umbilical cord blood, adult patient's own body like bone marrow, blood, etc. These stem cells work by repairing the damaged part of the body. They can treat cardiovascular disorders, diabetes and neurological disorders like stroke, muscular dystrophy, cerebral palsy, liver degeneration, and eye injuries. On the basis of their use the stem cells can be broadly divided into three types.

- (1) Totipotent: Can turn into any type of cell

in the body, including placenta. (2) Pluripotent: Can turn into any cell except placenta. (3) Multipotent: Have limited uses as they can turn into only some types of cells. These cells can be frozen at minus 270 degree Celsius in liquid Nitrogen and can be used 50 years after a person is born to treat ailments that may develop due to genetic predispositions.

The stem cells therapy has become so simple that no major surgery is required. In most cases these cells are infiltrated or directly injected intravenously into the patient's affected area. Scientists have also overcome the

ethical question of creating an embryo to extract stem cells and then destroy it using a therapeutic cloning process.

Stem Cell Research In India: Although stem cell research is at a nascent stage in India, it has immense potential. Now at AIIMS treatment using stem cells is available. In 2005, Indian doctors have successfully treated neurological disorders, cardiac disorders, diabetes, etc. As part of the facility, the AIIMS has set up an umbilical cord stem cell bank.

These cells are then cryopreserved - stored in liquid nitrogen at minus 270° Celsius. Even 90 years later, this can then be thawed and used for treatment. More than 45 disorders can be

treated with stem cells from umbilical cord blood.

New Embryo-Safe Stem Cells

In an innovative move, in 2006 a biotech company, Advanced Cell Technology, has found a new way of making stem cells without destroying embryos, touting it as a way to defuse one of the fiercest political and ethical debates. The new method works by taking an embryo at a very early stage of development and removing a single cell which can be coaxed into spawning embryonic stem cell line. With only one cell removed, the rest of the embryo retains its full potential for development.

Time Standards

The earliest instruments for measuring time included many devices like the Sundial and the water clock which were used in Egypt. In the 2nd century B.C., Ctesibius, a Greek engineer of Alexandria, redesigned the ancient Egyptian water clock and made it popular. During the Middle Ages mechanical clocks run by falling weights came into vogue. These were more convenient than the water clocks but both erred by as much as half an hour per day. In 1884 the second — the lowest unit of time — was defined as $1/86,400$ of the time that the Earth took to complete one rotation on its own axis or $1/86,400$ of a day of 24 hours. This, of course, meant that the 24-hour day was made up of 86,400 seconds.

But the Earth wobbles as it rotates. This wobbling leads to fluctuations in the time of rotation. It was therefore decided in 1960 to abandon the period of rotation as the pri-

mary unit (that is, a day of 24 hours), and adopt the period of revolution (of the Earth around the Sun) as the basis of calculation. The second was thus re-defined as $1/31,556,925.9747$ of the time that the Earth took to complete one revolution round the Sun. A year of 365 days and odd, then, consisted of about 31.5 million seconds.

In 1967 the General Conference on Weights & Measures recognised the atomic second as determined by the cesium (cesium) atom clock as the unit of time under the International System of Units (SI). The atomic second is defined as the time taken by the cesium electron to complete 9,192,631,770 spins. The definition is inaccurate because the cesium electron sometimes takes more spins and sometimes less spins than the defined norm. The atomic clock has 2 specific advantages. It is not affected by the vagaries of the atmosphere.

nor by the fluctuations in the rotation of the Earth. The latter has become important in recent years. For, it has been observed from 1970 onwards that the Earth is slowing down in rotation by nearly a second every year. Since this error has been noticed, clocks all over the world are being corrected at the beginning of every year to conform to the atomic time. The atomic clock developed by the British National Physical Laboratory has achieved a very high degree of accuracy. It is accurate to one second in 300 years. Since January 1972, a new standard of time called the Co-ordinated Universal Time (UTC) has also been maintained in Paris, the headquarters of the General Conference on Weights & Measures. This is not based on any single atomic clock but on the average of atomic clock readings from 18 timing centres around the world.

The UTC does not gain or lose more than one hundred millionth of a second per day. This has whittled down the infinitesimal error of the atomic clocks to the vanishing point. It is expected that the UTC will remain absolutely correct for a quarter million years.

The system of Standard Time was introduced to correlate the time systems of various countries on an international basis. For this purpose the Earth was divided into 24 longitudinal zones, each zone being 15 degrees of an arc or one hour apart in time. The zero zone is centred at Greenwich (London) which gives the GMT or the Greenwich Mean Time. The 12th zone is divided by the 180th meridian, the International Date-line.

The zones to the east of this line are numbered from 1 to 12 with the prefix minus indicating the number of hours to be subtracted to obtain the Greenwich Time. The zones to the west are similarly numbered with the prefix plus which shows the number of hours that must be added to get

the Greenwich Time. The Date-line is a zigzag line that coincides more or less with the 180th meridian. When the Date-line is crossed to the west the date must be advanced by one day. When the Line is crossed to the east, the date must be set back by one day. The Line is deflected between north latitudes 48° and 75° with the result that all Asia lies to the west of the line.

The 24-hour time is now being increasingly used especially by railways and other transport organisations. Its great advantage is that it dispenses with the suffixes a.m. and p.m.. In the 24-hour system, day begins at midnight, the zero hour, and the hours that follow are consecutively numbered from 0 to 23.

Away from Equator in the high latitudes daylight timings vary considerably. In such areas DAYLIGHT Saving Time (DST) is followed during a part of the year. The idea of setting clocks ahead to have more daytime during the waking hours was first suggested in a whimsical essay by Benjamin Franklin in 1784. In 1907 in England William Willett campaigned for setting clocks ahead by 80 minutes in four moves of 20 minutes each during the spring and summer. A less radical suggestion, to advance clocks by an hour for spring and summer, was rejected the next year. Summer DST was first adopted during World War I in such countries as the United States, Germany, and Great Britain. The same policy was followed during World War II. A variation, "double summer time," was used in England, with clocks advanced two hours in summer and one hour in winter. The Uniform Time Act of 1966, which called for six months of DST, took effect in most of the United States in 1967. Year-round DST was tried in 1973 but quickly lost public support. In 1986 DST was set to begin on the first Sunday in April and end on the last Sunday in October.

| Time Chart | | | |
|-----------------------|--------------------|----------------------|-----------------------|
| Countries | (+/- IST)
Hours | | |
| Afghanistan | (-) 1.30 | Ghana | (-) 5.30 |
| Albania | (-) 4.30 | Gibraltar | (-) 4.30 |
| Algeria | (-) 4.30 | Greece | (-) 3.30 |
| Antilles | (-) 9.30 | Grenada | (-) 9.30 |
| Argentina | (-) 8.30 | Guatemala | (-) 11.30 |
| Australia | (+) 2.30/(+) 4.30 | Guyana | (-) 8.30 |
| Austria | (-) 4.30 | Haiti | (-) 10.30 |
| Bahamas | (-) 10.30 | Honduras | (-) 11.30 |
| Bahrain | (-) 2.30 | Hong Kong | (+) 2.30 |
| Bangladesh | (+) 0.30 | Hungary | (-) 4.30 |
| Barbados | (-) 9.30 | Iceland | (-) 5.30 |
| Belgium | (-) 4.30 | Indonesia | (+) 1.30/3.30 |
| Belize | (-) 11.30 | Iran | (-) 2.00 |
| Benin | (-) 4.30 | Iraq | (-) 2.30 |
| Bermuda | (-) 9.30 | Ireland | (-) 5.30 |
| Bolivia | (-) 9.30 | Italy | (-) 4.30 |
| Botswana | (-) 3.30 | Ivory Coast | (-) 5.30 |
| Brazil | (-) 8.30 | Jamaica | (-) 10.30 |
| Brunei | (+) 2.30 | Japan | (+) 3.30 |
| Bulgaria | (-) 2.30 | Jordan | (-) 3.30 |
| Burkina Faso | (-) 5.30 | Kenya | (-) 2.30 |
| Cameroon | (-) 4.30 | Korea (South) | (+) 3.30 |
| Canada | (-) 9/14.30 | Kuwait | (-) 2.30 |
| Yemen Islands | (-) 10.30 | Lebanon | (-) 3.30 |
| Ken. African Republic | (-) 4.30 | Liberia | (-) 5.30 |
| Chad | (-) 4.30 | Libya | (-) 3.30 |
| Chile | (-) 9.30 | Luxembourg | (-) 4.30 |
| China | (+) 2.30 | Malawi | (-) 3.30 |
| Colombia | (-) 10.30 | Malaysia | (+) 2.30 |
| Congo | (-) 4.30 | Maldives | (-) 0.30 |
| Costa Rica | (-) 11.30 | Mali | (-) 5.30 |
| Cuba | (-) 10.30 | Malta | (-) 4.30 |
| Czech Republic | (-) 4.30 | Marshall Islands | (+) 6.30 |
| Denmark | (-) 4.30 | Mexico | (-) 11.30 |
| Djibouti | (-) 2.30 | Micronesia | (+) 3.30/5.30 |
| Dominican Islands | (-) 9.30 | Monteserat | (-) 9.30 |
| Dominican Republic | (-) 9.30 | Morocco | (-) 5.30 |
| Ecuador | (-) 10.30 | Mozambique | (-) 3.30 |
| Egypt | (-) 3.30 | Myanmar | (+) 1.00 |
| Ethiopia | (-) 2.30 | Namibia | (-) 3.30 |
| France | (+) 6.30 | Nauru | (+) 6.30 |
| Germany | (-) 3.30 | Nepal | (+) 0.00 |
| Ghana | (-) 4.30 | Netherlands | (-) 4.30 |
| Greece | (-) 3.30 | New Zealand | (+) 6.30 |
| Grenada | (-) 9.30 | Nicaragua | (-) 11.30 |
| Guatemala | (-) 11.30 | Niger | (-) 5.30 |
| Guyana | (-) 8.30 | Nigeria | (-) 4.30 |
| Haiti | (-) 10.30 | Norway | (-) 4.30 |
| Honduras | (-) 11.30 | Oman | (-) 1.30 |
| Hong Kong | (+) 2.30 | Pakistan | (-) 0.30 |
| Hungary | (-) 4.30 | Panama | (-) 10.30 |
| Iceland | (-) 5.30 | Papua New Guinea | (+) 4.30 |
| Indonesia | (+) 1.30/3.30 | Paraguay | (-) 9.30 |
| Iran | (-) 2.00 | Peru | (-) 10.30 |
| Iraq | (-) 2.30 | Philippines | (+) 2.30 |
| Ireland | (-) 5.30 | Poland | (-) 4.30 |
| Italy | (-) 4.30 | Portugal | (-) 5.30 |
| Ivory Coast | (-) 5.30 | Porto Rica | (-) 9.30 |
| Jamaica | (-) 10.30 | Qatar | (-) 2.30 |
| Japan | (+) 3.30 | Romania | (-) 3.30 |
| Jordan | (-) 3.30 | Russia | (-) (2.30) — (+) 5.30 |
| Kenya | (-) 2.30 | Saudi Arabia | (-) 2.30 |
| Korea (South) | (+) 3.30 | Senegal | (-) 5.30 |
| Kuwait | (-) 2.30 | Seychelles | (-) 1.30 |
| Lebanon | (-) 3.30 | Sierra Leone | (-) 5.30 |
| Liberia | (-) 5.30 | Singapore | (+) 2.30 |
| Libya | (-) 3.30 | Somalia | (-) 2.30 |
| Luxembourg | (-) 4.30 | Spain | (-) 4.30 |
| Malawi | (-) 3.30 | Sri Lanka | (Indian Time) |
| Malaysia | (+) 2.30 | Sudan | (-) 3.30 |
| Maldives | (-) 0.30 | Suriname | (-) 8.30 |
| Mali | (-) 5.30 | Swaziland | (-) 3.30 |
| Malta | (-) 4.30 | Sweden | (-) 4.30 |
| Marshall Islands | (+) 6.30 | Switzerland | (-) 4.30 |
| Mexico | (-) 11.30 | Syria | (-) 3.30 |
| Micronesia | (+) 3.30/5.30 | Taiwan | (+) 2.30 |
| Monteserat | (-) 9.30 | Tanzania | (-) 2.30 |
| Morocco | (-) 5.30 | Thailand | (+) 1.30 |
| Mozambique | (-) 3.30 | Tonga | (+) 7.30 |
| Myanmar | (+) 1.00 | Trinidad and Tobago | (-) 9.30 |
| Namibia | (-) 3.30 | Tunisia | (-) 4.30 |
| Nauru | (+) 6.30 | Turkey | (-) 2.30 |
| Nepal | (+) 0.00 | Uganda | (-) 2.30 |
| Netherlands | (-) 4.30 | United Arab Emirates | (-) 1.30 |
| New Zealand | (+) 6.30 | UK | (-) 5.30 |
| Nicaragua | (-) 11.30 | Uruguay | (-) 8.30 |
| Niger | (-) 5.30 | Vanuatu | (-) 5.30 |
| Nigeria | (-) 4.30 | Vatican City | (-) 4.30 |
| Norway | (-) 4.30 | Venezuela | (-) 9.30 |
| Oman | (-) 1.30 | Yemen | (-) 2.30 |
| Pakistan | (-) 0.30 | Yugoslavia | (-) 4.30 |
| | | Zaire | (-) 4.30 |
| | | Zambia | (-) 3.30 |
| | | Zimbabwe | (-) 2.30 |
| | | USA | (4 Time Zones) |
| | | New York | (-) 10.30 |
| | | Texas | (-) 11.30 |
| | | Phoenix | (-) 12.30 |
| | | San Francisco | (-) 13.30 |
| | | Hawai (USA) | (-) 16.00 |

Noise Scale

Sounds are tiny vibrations that can travel through air and other materials. The loudness of a sound is measured in decibels (db).

Typical sound levels in decibels :

| | |
|---------------------------------------|-----------|
| 1. Silence | 0 db |
| 2. Rustle of leaves | 10 db |
| 3. Breathing | 10 db |
| 4. Wind in the trees | 20 db |
| 5. Whisper | 20-30 db |
| 6. Ticking Clock | 30 db |
| 7. Radio Music, inside home | 50-60 db |
| 8. Loud television | 70db |
| 9. Children playing | 60-80 db |
| 10. Vacuum cleaner | 80 db |
| 11. Mixie loud snore | 88 db |
| 12. Roaring Lion | 90 db |
| 13. Road Traffic Noise | 60-90 db |
| 14. Heavy truck traffic | 90-100 db |
| 15. Powerful rock music | 100 db |
| 16. Motor Cycle | 105 db |
| 17. Power drill | 110 db |
| 18. Thunder storm | 110 db |
| 19. Pain threshold for humans | 130 db |
| 130 db above causes damage to hearing | |

Temperature Scales

The Celsius scale was worked out by the Swedish physicist and astronomer Anders Celsius in 1742. It was revised by another Swedish physicist J.P. Christen. This scale was originally called Centigrade. It was renamed Celsius scale in honour of its inventor Celsius.

The Fahrenheit scale was devised by the German-born physicist Gabriel Daniel Fahrenheit around 1715. The Kelvin scale was pioneered by the British physicist William Thomson Kelvin (1824-1907), later Lord Kelvin. The International System of Units (SI) recognises the Celsius and Kelvin scales. The Kelvin scale is derived from thermo-dynamics and is of special importance to scientists. The scale generally used by all is the Celsius. The unit of temperature adopted by the SI is based on the Triple Point of Water, i.e., the temperature at which solid, liquid, and gaseous water are all in equilibrium. The triple point has been defined as 273.16° (Kelvin) which is equivalent to 0.01°C. Zero degree Kelvin is the Absolute Zero. This corresponds to -273.16° Celsius and -459.69° Fahrenheit. Absolute Zero is a thermodynamic concept (based on heat energy). It is the point at which molecules have no heat energy. At this point all motion stops. Even atomic particles slow down.

Temperature conversion formula

Celsius to Kelvin: $K = ^\circ C + 273.16$

Fahrenheit to Celsius: $^{\circ}C = (^{\circ}F - 32) \times 0.555$

Celsius to Fahrenheit: $^{\circ}F = ^{\circ}C \times 1.8 + 32$

Comparison of temperature scales:

| | $^{\circ}F$ | $^{\circ}C$ | K |
|----------------------|-------------|-------------|--------|
| Absolute zero | -459.7 | -273.15 | 0 |
| Freezing pt. water | 32 | 0 | 273.15 |
| Normal human body | 98.6 | 37 | 310.15 |
| Boiling point, water | 212 | 100 | 373.15 |

Memory Size Conversion Table

| | Bytes | Kilobytes | Megabytes | Gigabytes |
|----------|-------------------|---------------|-----------|-----------|
| Kilobyte | 1,024 | | | |
| Megabyte | 1,048,576 | 1,024 | | |
| Gigabyte | 1,073,741,824 | 1,048,576 | 1,024 | |
| Terabyte | 1,099,511,627,776 | 1,073,741,824 | 1,048,576 | 1,024 |

Inventions and Discoveries

| Invention | Date | Inventor | Country |
|---------------------------|---------|------------------------------|-------------|
| Acetylene gas | 1862 | Berthelot | French |
| Adding Machine | 1642 | Pascal | French |
| Adhesive tape, Scotch | 1930 | Richard Drew | USA |
| Aeroplane | 1903 | Orville & Wilbur Wright | U.S.A. |
| Air conditioning | 1902 | Carrier | USA |
| Airplane, jet engine | 1939 | Ohain | German |
| Airship (non-rigid) | 1852 | Henri Giffard | France |
| Aerosol spray | 1926 | Erik Rotheim | Norway |
| Airship (rigid) | 1900 | G.F. von Zeppelin | Germany |
| Artificial Heart | 1957 | Willem Kolff | Netherlands |
| Atomic Bomb | 1945 | J. Robert Oppenheimer | USA |
| Atomic numbers | 1913 | Moseley | Britain |
| Atomic theory | 1803 | Dalton | Britain |
| Automatic rifle | 1918 | John Browning | USA |
| Bakelite | 1907 | Leo H. Baekeland | Belgium |
| Ballistic missile | 1944 | Wernher von Braun | Germany |
| Balloon | 1783 | Jacques & Joseph Montgolfier | France |
| Ball-Point Pen | 1888 | John J. Loud | U.S.A. |
| Ball-Point Pen (Modern) | 1938 | Lazlo Biro | Hungary |
| Barometer | 1644 | Evangelista Torricelli | Italy |
| Battery (Electric) | 1800 | Alessandro Volta | Italy |
| Bicycle | 1839-40 | Kirkpatrick Macmillan | Britain |
| Bicycle Tyres (pneumatic) | 1888 | John Boyd Dunlop | Britain |
| Bilocal Lens | 1780 | Benjamin Franklin | U.S.A. |
| Bleaching Powder | 1798 | Tennant | Britain |
| Bolt-action rifle | 1889 | P. von Mauser | Germany |
| Bunsen Burner | 1855 | R. Wilhelm von Bunsen | Germany |
| Burglar Alarm | 1858 | Edwin T. Holmes | U.S.A. |
| Calculus | 1670 | Newton | Britain |
| Camera, Kodak | 1888 | Walker Eastman | USA |
| Canned food | 1804 | Appert | French |
| Car (steam) | c. 1769 | Nicolas Cugnot | France |
| Car (Petrol) | 1888 | Karl Benz | Germany |
| Carburettor | 1876 | Gottlieb Daimler | Germany |
| Carpet Sweeper | 1876 | Melville R. Bissell | U.S.A. |
| Cash Register | 1879 | James Ritty | U.S.A. |
| Cassette, audio | 1963 | Philips Co. | Holland |
| Cassette, videotape | 1969 | Sony | Japan |
| Cellophane | 1908 | Dr. J. Brandenberger | Switzerland |
| Celluloid | 1861 | Alexander Parkes | Britain |
| Cement (Portland) | 1824 | Joseph Aspdin | Britain |
| Chemotherapy | 1909 | Ehrlich | German |
| Chronometer | 1735 | John Harrison | Britain |

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|---------------------------|------|------------------------------------|--------------------|
| Cinema | 1895 | Nicolas & Jean Lumiere | France |
| Clock (mechanical) | 1725 | I-Hsing & Liang Ling-Tsan | China |
| Clock (Pendulum) | 1656 | Christian Huygens | Netherlands |
| Cloning, DNA | 1973 | Boyer, Cohen | USA |
| Cloning, mammal | 1996 | Wilmut, et al | UK |
| Compact disc | 1972 | RCA | USA |
| Compact disc player | 1979 | Sony, Philips Co | Japan, Netherlands |
| Computer, laptop | 1987 | Sinclair | Britain |
| Computer, mini | 1960 | Digital Corp. | USA |
| Crossword puzzle | 1913 | Arthur Wynne | U.S.A. |
| CT scan | 1973 | Hounsfield | Britain |
| Dental Plate | 1817 | Anthony A. Plantson | U.S.A. |
| Diesel Engine | 1895 | Rudolf Diesell | Germany |
| Disc Brake | 1902 | Dr. F. Lanchester | Britain |
| Disc, video | 1972 | Philips Co. | Holland |
| DNA, structure | 1951 | Crick-UK, Watson-US, Wilkins-UK | |
| Dynamo | 1832 | Hypolite Pixii | France |
| Electric Blanket | 1883 | Exhibited at the Vienna Exhibition | |
| Electric Flat Iron | 1882 | H.W. Seeley | U.S.A. |
| Electric Furnace | 1861 | William Siemens | Britain |
| Electric Lamp | 1879 | Thomas Alva Edison | U.S.A. |
| Electric Motor (DC) | 1873 | Zenobe Gramme | Belgium |
| Electric Motor (AC) | 1888 | Nikola Tesla | U.S.A. |
| Electric iron | 1882 | Henry W. Seeley | U.S.A. |
| Electric Washing machine | 1906 | Alva J. Fisher | U.S.A. |
| Electro-Magnet | 1824 | William Sturgeon | Britain |
| Electron | 1897 | Thomson, J | Britain |
| Electroplating | 1805 | Luigi Brugnatelli | Italy |
| Electronic Computer | 1824 | Dr. Alan M. Turing | Britain |
| Facsimile Machine | 1843 | Alexander Bain | Britain |
| Fibre optics | 1955 | Kacary | Britain |
| Film (moving outlines) | 1885 | Louis Prince | France |
| Film (talking) | 1922 | J. Engl, J. Muscolle & H. Fox | Germany |
| Film (musical sound) | 1923 | Dr. Le De Forest | U.S.A. |
| Floppy disk | 1979 | IBM | U.S.A. |
| Frequency Modulation (FM) | 1933 | Ed. Armstrong | U.S.A. |
| Frisbee | 1949 | Wes Wills | U.S.A. |
| Frozen food | 1924 | Carroll's Biscuits | U.S.A. |
| Fountain Pen | 1884 | Leone E. Waterman | U.S.A. |
| Galvanometer | 1834 | Anders-Strömberg | Sweden |
| Gas Lighting | 1792 | William Murdoch | Scotland |
| Geiger counter | 1928 | Geiger | Germany |
| Glass (stained) | 1789 | Augsburg | Germany |
| Glassware | 1789 | St. Louis | USA |
| Glider | 1853 | Clément Ader | France |
| Gramophone | 1877 | Thomas Edison | USA |
| Guided missile | 1947 | Vernon | USA |
| Gyrocompass | 1880 | Alfred Swasey | USA |
| Helicopter | 1853 | Leon de Moivre | France |
| HIV | 1981 | Baruch Blumberg | USA |
| Holography | 1947 | Denise Gabor | Hungary |
| Hovercraft | 1955 | Cristian Bratu | Romania |
| Hydrogen bomb | 1952 | Edward Teller | USA |

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|---------------------------|--------------|-------------------------------|-------------------------------------------|
| Intelligence testing | 1905 | Simon Binet | French |
| Iron Working (Carbonised) | c. 1200 B.C. | | Cyprus & N. Palestine |
| Jet Engine | 1937 | Sir Frank Whittle | Britain |
| Kevlar | 1965 | Blades Kwolek | USA |
| Laser | 1957 | Gould | U.S.A. |
| Laundrette | 1934 | J.F. Cantrell | U.S.A. |
| Lift (Mechanical) | 1852 | Elisha G. Otis | U.S.A. |
| Lightning Conductor | 1752 | Benjamin Franklin | U.S.A. |
| Linoleum | 1860 | Frederick Walton | Britain |
| Linotype | 1883 | O. Margenthaler | U.S.A. |
| Locomotive | 1804 | Richard Trevithick | Britain |
| Logarithms | 1614 | Napier | Britain |
| Loom, power | 1785 | E. Cartwright | Britain |
| Loudspeaker | 1900 | Horace Short | Britain |
| Machine Gun | 1718 | James Puckle | Britain |
| Magnetic Recording Tape | 1928 | Fritz Pfleumer | Germany |
| Maps | c.3800 B.C. | | Sumeria (clay tablets of river Euphrates) |
| Margarine | 1869 | Hippolyte M. Mouriés | France |
| Match, safety | 1826 | John Walker | Britain |
| Microphone | 1876 | Alexander Graham Bell | U.S.A. |
| Microprocessor | 1971 | Robert Noyce & Gordon Moore | U.S.A. |
| Microscope, comp. | 1590 | Z. Janssen | Netherlands |
| Microscope, elect. | 1931 | Ruska Knoll | German |
| Microwave Oven | 1947 | Percy LeBaron Spencer | U.S.A. |
| Motor Cycle | 1885 | G. Daimler of Cannstatt | Germany |
| Movie Projector | 1893 | Thomas Edison | U.S.A. |
| MRI | 1971 | Damadian | USA |
| Neon Lamp | 1910 | Georges Claude | France |
| Neutron | 1932 | Chadwick | Britain |
| Neutron bomb | 1958 | Samuel Cohen | USA |
| Nylon | 1937 | Dr. Wallace H. Carothers | U.S.A. |
| Optical Fibre | 1955 | Narinder Kapany | Germany |
| Paper | A.D. 105 | | China |
| Pacemaker | 1952 | Zoll | USA |
| Parchment | c. 1300 B.C. | | Egypt |
| Parking Meter | 1935 | Carlton C. Magee | U.S.A. |
| Parallel Computing | 1979 | Seymour Cray & David Gelemtes | U.S.A. |
| Pasteurization | 1867 | Louis Pasteur | France |
| Pencil | 1792 | Jacques-Nicolas Conte | France |
| Periodic table | 1869 | Mendeleev | Russia |
| Photocopier | 1938 | Carlson | USA |
| Photoelectric cell | 1893 | Julius Elster, Hans F. Geitel | Germany |
| Photo film, celluloid | 1893 | Reichenbach | USA |
| Photo film, transparent | 1884 | Goodwin Eastman | USA |
| Photographic paper | 1835 | Talbot | Britain |
| Photography (on metal) | 1826 | J.N. Niepce | France |
| Photography (on paper) | 1835 | W.H. Fox Talbot | Britain |
| Photography (on film) | 1888 | John Carbutt | U.S.A. |
| Piano | 1709 | Cristofori | Italy |
| Pistol, revolver | 1836 | Colt | USA |
| Plasticine | 1900 | William Harbutt | U.K. |
| Plutonium fission | 1940 | Kennedy, Wahl, Seaborg, Segre | U.S.A. |
| Porcelain | 1851 | | Earliest report from China |

| Post-it-note | 1980 | 3M | USA |
|-----------------------------------|---------|----------------------------------|---------------|
| Potter's Wheel | c. 6500 | 8.C. | Asia Minor |
| Pop-up toaster | 1927 | Charles Strue | U.S.A. |
| Printing Press | c. 1455 | Johann Gutenberg | Germany |
| Printing (rotary) | 1846 | Richard Hoe | U.S.A. |
| Printing (Web) | 1865 | William Bullock | U.S.A. |
| Propeller (ship) | 1837 | Francis Smith | Britain |
| Proton | 1919 | Rutherford | N.Zealand |
| Quantum theory | 1900 | Planck | German |
| Radar | 1922 | A.H. Taylor & Leo C. Young | U.S.A. |
| Radiocarbon dating | 1947 | Libby | U.S.A. |
| Radio Telegraphy | 1864 | Dr. Mahlon Loomis | U.S.A. |
| Radio Telegraphy (Trans Atlantic) | 1901 | G. Marconi | Italy |
| Rayon | 1883 | Sir Joseph Swan | Britain |
| Razor (electric) | 1931 | Col. Jacob Schick | U.S.A. |
| Razor (safety) | 1895 | King C. Gillette | U.S.A. |
| Record (long-playing) | 1948 | Dr. Peter Goldmark | U.S.A. |
| Refrigerator | 1850 | James Harrison, Alexander Catlin | U.S.A. |
| Relativity theory | 1905 | Einstein | German |
| Rollerblades | 1980 | Scott & Brennan Olsen | U.S.A. |
| Rubber (latex foam) | 1928 | Dunlop Rubber Co. | Britain |
| Rubber (Tyres) | 1846 | Thomas Hancock | Britain |
| Rubber (vulcanised) | 1841 | Charles Goodyear | U.S.A. |
| Rubber (waterproof) | 1823 | Charles Macintosh | Britain |
| Rubik Cube | 1975 | Prof. Emo Rubik | Hungary |
| Safety Pin | 1849 | Walter Hunt | U.S.A. |
| Safety razor | 1903 | King Camp Gillette | U.S.A. |
| Seat belt | 1959 | Volvo | Sweden |
| Self-starter | 1911 | Charles F. Kettering | U.S.A. |
| Ship (steam) | 1775 | J.C. Perier | France |
| Ship (turbine) | 1894 | Hon. Sir C. Parsons | Britain |
| Silk Manufacture | c. 50 | 8.C. | China |
| Skateboard | 1958 | Bill & Mark Richards | U.S.A. |
| Skyscraper | 1882 | W. Le Baron Jenny | U.S.A. |
| Slide Rule | 1621 | William Oughtred | Britain |
| Slinky spring | 1946 | Richard James | U.S.A. |
| Spectacles (convex) | 1289 | | Venice, Italy |
| Spinning Frame | 1769 | Sir Richard Arkwright | Britain |
| Spinning Jenny | 1764 | James Hargreaves | Britain |
| Spinning Mule | 1779 | Samuel Crompton | Britain |
| Steam Engine | 1698 | Thomas Savery | Britain |
| Steam Engine (piston) | 1712 | Thomas Newcomen | Britain |
| Steam Engine (condenser) | 1765 | James Watt | Britain |
| Steel (stainless) | 1913 | Harry Brearley | Britain |
| Stethoscope | 1819 | Laennec | French |
| Submarine | 1776 | David Bushnell | U.S.A. |
| Super Computer | 1976 | J.H. Van Tassel | U.S.A. |
| Swiss army knife | 1891 | Karl Elsener | Switzerland |
| Synthesiser | 1964 | Moog | USA |
| Tank | 1914 | Sir Ernest D. Swington | Britain |
| Tape recorder | 1899 | Fessenden Poulsen | Denmark |
| Teddy bear | 1903 | Margarete Steiff | Germany |
| Telegraph | 1787 | M. Lammond | |

| | | | |
|---------------------------------|--------------|------------------------------|-----------------------|
| Telegraph Code | 1837 | Samuel F.B. Morse | U.S.A. |
| Telephone, cellular | 1947 | Bell Labs | U.S.A. |
| Telephone (Imperfect) | 1849 | Antonio Meucci | Italy |
| Telephone (Perfected) | 1876 | Alexander Graham Bell | U.S.A. |
| Telescope | 1608 | Hans Lippershey | Netherlands |
| Television (mechanical) | 1926 | John Logie Baird | Britain |
| Television (electronic) | 1927 | P.T. Farnsworth | U.S.A. |
| Television, colour | 1928 | John Logie Baird | Britain |
| Terylene | 1941 | J.R. Whinfield, J.T. Dickson | Britain |
| Transformer | 1831 | Michael Faraday | Britain |
| Transistor | 1948 | Bardeen, Shockley & Brattain | U.S.A. |
| Transistor radio | 1955 | Sony | Japan |
| Uranium fission, atomic reactor | 1942 | Szilard Fermi | U.S.A. |
| Vacuum cleaner, elec. | 1907 | Spangler | USA |
| Video tape | 1956 | Charles Ginsberg | U.S.A. |
| Velcro (hook-and-loop-fastener) | 1948 | Georges de Mestral | Switzerland |
| Washing Machine (elec.) | 1907 | Hurley Machine Co. | U.S.A. |
| Watch | 1462 | Bartholomew Manfredi | Italy |
| Water Closet | 1589 | Designed by J. Harrington | Britain |
| Welder (electric) | 1877 | Elisha Thomson | U.S.A. |
| Windmill | c. 600 | | Persian corn grinding |
| Wireless (telegraphy) | 1896 | G.Marconi | Italy |
| Writing | c. 3500 B.C. | | Sumerian civilization |
| X-ray | 1895 | Wilhelm K. Roentgen | Germany |
| Yo-Yo | 1929 | Donald F. Duncan | U.S.A. |
| Zip Fastener | 1891 | W.L. Judson | U.S.A. |

Milestones in Medicine

| | | | |
|-----------------------------------|----------------|--------------------------|----------------|
| Adrenaline | 1894 | Schafer and Oliver | Britain |
| Anatomia* | 1316 | Mondino | Italy |
| Anesthesia, local | 1885 | Koller | Austria |
| Anesthesia, spinal | 1898 | Bier | Germany |
| Anti-toxins (science of immunity) | 1890 | Behring & Kitasato | Germany, Japan |
| Artificial Heart | 1957 | Willem Kolff | Netherlands |
| Ashtanga Hridaya | c.550 AD | Vagbhata | India |
| Aspirin | 1889 | Dreser | Germany |
| Aureomycin | 1948 | Duggar | USA |
| Ayurveda | 2000-1000 B.C. | Atreya | India |
| Bactena | 1683 | Leeuwenhock | Netherlands |
| Bacteriology | 1872 | Ferdinand Cohn | Germany |
| Biochemistry | 1648 | Jan Baptista Van Helmont | Belgium |
| Blood plasma storage (blood bank) | 1940 | Drew | USA |
| Blood Transfusion | 1625 | Jean-Baptiste Denys | France |
| Cardiac Pacemaker | 1932 | A.S. Hyman | USA |
| CAT Scanner | 1968 | Godfrey Hounsfield | Britain |
| Chemotherapy | 1493-1541 | Paracelsus | Switzerland |
| Chloroform as anaesthetic | 1847 | James Simpson | Britain |
| Chloromycetin | 1947 | Burkholder | USA |
| Cholera, T.B. germs | 1877 | Robert Koch | Germany |
| Circulation of blood | 1628 | William Harvey | Britain |
| Cortisone | 1936 | Edward Calvin-Kendall | USA |
| Cortisone | 1936 | Kendall | USA |
| Cryo-surgery | 1953 | Henry Swan | USA |

| | | | |
|---------------------------------------|------------|---------------------------------|---------------------------|
| Diphtheria germs | 1883-84 | Klebs & Löffler | Germany |
| Electro-cardiograph | 1903 | Willem Einthoven | Netherland |
| Electro-encephalogram | 1929 | Hans Berger | Germany |
| Embryology | 1792-1896 | Kari Ernest-Van Baer | Estonia |
| Endocrinology | 1902 | Bayliss & Starling | Britain |
| First Test Tube Baby | 1978 | Stephoe & Edwards | Britain |
| Gene Therapy on humans | 1980 | Martin Clive | USA |
| Genes associated with Cancer | 1982 | Robert Weinberg & others | USA |
| Heart Transplant Surgery | 1967 | Christian Barnard | S.Africa |
| Histology | 1771-1802 | Marie Bichat | France |
| Hypodermic Syringe | 1853 | Alexander Wood | Britain |
| Insulin for Diabetes | 1921 | Banting & Best - | Canada, Macleod - Britain |
| Kidney Machine | 1944 | Kolf | Netherland |
| Leprosy Bacillus | 1873 | Hansen | Norway |
| LSD (Lysergic acid diethylamide) | 1943 | Hoffman | Switzerland |
| Malaria germs | 1880 | Laveran | France |
| Morphine | 1805 | Friedrich Sertumer | Germany |
| Neurology | 1758-1828 | Franz Joseph Gall | Germany |
| Nuclear magnetic resonance imaging | 1971 | Raymond Damadian | USA |
| Open Heart Surgery | 1953 | Walton Lillehei | USA |
| Oral Contraceptive pills | 1955 | Gregory Pincus, Rock | USA |
| Penicillin | 1928 | Alexander Fleming | Britain |
| Physiology | 1757-66 | Albrecht Von Haller | Switzerland |
| Positron Emission Tomography | 1978 | Louis Sokoloff | USA |
| Psychoanalysis | 1895 | Sigmund Freud | Austria |
| Rabies Vaccine | 1860 | Louis Pasteur | France |
| Recombinant-DNA technology | 1972-73 | Paul Berg, H.W. Boyer, S. Cohen | USA |
| Reserpine | 1949 | Jai Vakil | India |
| Rh-factor | 1940 | Karl Landsteiner | USA |
| Serology | 1884-1915 | Paul Ehrlich | Germany |
| Sex hormones | 1910 | Eugen Steinach | Austria |
| Sidhayoga | c.750 | Vrdakunta | India |
| Small Pox eradicated | 1980 | W.H.O. Declaration | UN |
| Stethoscope | 1819 | Rene Laennec | France |
| Streptomycin | 1944 | Selman Waksman | USA |
| Synthetic Antigens | 1917 | Landsteiner | USA |
| Terramycin | 1950 | Finlay & Others | USA |
| Thyroxin | 1919 | Edward Calvin-Kendall | USA |
| Trichloroethane | 1939 | Paul Muller | Germany |
| Typhus Vaccine | 1909 | J. Nicolle | France |
| Use of artificial heart (for surgery) | 1963 | Michael de Bakey | USA |
| Vaccination | 1796 | Edward Jenner | Britain |
| Vaccine, measles | 1963 | Enders | USA |
| Vaccine, meningitis | 1987 | Gordon, et al. Connaught Lab | USA |
| Vaccine, polio | 1954 | Jonas Salk | USA |
| Vaccine, polio- oral | 1960 | Albert Sabin | USA |
| Vaccine, rabies | 1885 | Louis Pasteur | France |
| Vaccine, smallpox | 1796 | Jenner | Britain |
| Virology | 1892 | Ivanovski & Bajemick | USSR, Netherland |
| Vitamin A | 1913 | McCullum and M. Davis | USA |
| Vitamin B1 | 1936 | Minot & Murphy | USA |
| Vitamin C | 1919 | Froelich Holst | Norway |
| Vitamin D | 1925 | McCullum | USA |
| Vitamins K | 1938 | Doisy Dam | USA |
| Western Scientific Therapy | 460-370 BC | Hippocrates | Greece |
| Yoga | 200-100 BC | Patanjali | India |

Matter Facts

Lowest Melting Point Since Mercury melts at -38.8°C (-38°F), it is liquid at room temperature. Mercury is used in thermo-meters because it expands as it is heated.

Highest melting point The temperature must be $3,652^{\circ}\text{C}$ ($6,606^{\circ}\text{F}$) before carbon will melt-two-thirds as hot as the sun's surface.

Rarest elements Astatine is the rarest element on Earth; rhodium is the scarcest metal in the world-just 3 tonnes (2.9 tons) are mined every year.

Heaviest metal A 33-cm3 (13-in³) cube of osmium weighs 640 kg (1,411 lb)-equivalent to ten people each weighing 64 kg

Acids and Alkalis

The acid or alkali (Or base) content of a substance is measured in pH (potential Hydrogen) on a scale of 0-14. Acids dissolve in water to form sharp-tasting solutions, like lemon juice. Alkalis dissolve in water to form soapy solutions: Substance (pH) - Hydrochloric Acid (Acid) 0, Car battery acid 1.0, Lemon juice 2.4, Apple 3.0, Vinegar 4.0, Rainwater 5.6, Milk 6.6, Pure water Neutral) 7.0, Human blood 7.4, Sea water 7-8, Baking soda 8.5, Caustic Soda (Alkali) 14.0

Colours of the spectrum

Violet Indigo Blue Green Yellow Orange Red

Formulae

a = length of one side, b = length of base, h = length (perpendicular height), r = radius

Volume: Cube or cuboid $h \times b \times a$ • Cylinder $\pi \times r^2 \times h$ • Sphere $4 \times \pi \times r^3 / 3$ • Cone $\pi \times r^2 \times h / 3$ • Pyramid $a \times b \times h / 3$

Area: Circle $\pi \times r^2$ • Rectangle $b \times h$ • Parallelogram $b \times h$ • Triangle $1/2 \times b \times h$ • Trapezium $1/2 \times (a + b) \times h$ • Cube (surface

area) $6 \times b \times h$ • Surface of radius r (surface area) $4 \times \pi \times r^2$ • Cylinder (surf. area) $(2 \times \pi \times r \times h) + (2 \times \pi \times r^2)$ • Cone (area of curved surf.) $\pi \times r \times (r^2 + h^2)$

Others: Velocity = distance/time • Acceleration = velocity/time • Momentum = mass \times velocity • Force = mass \times acceleration • Pressure = force/area • Work = force \times distance • Moment of Inertia = mass \times radius of gyration • Modulus of elasticity = stress/strain • Surface tension = force/length.

Gauge and Bore diameter (mm):

6 = 23.34; 10 = 19.67; 12 = 18.52; 14 = 17.60; 16 = 16.81; 20 = 15.90

Carat: is a measure of fineness for gold equal to 1/24 part of pure gold in an alloy. 24 = Pure gold; 18 = 1/4 alloy. For precious stones, it is equal to 200 mgms or 3.086 grains troy.

Quick Conversion Table

| Imperial to | | metric multiply by | |
|-----------------|----------------------|--------------------|---------|
| Length | inches | cm | 2.54 |
| | feet | m | 0.3048 |
| | yards | m | 0.9144 |
| | statute miles | km | 1.6093 |
| | nautical miles | km | 1.852 |
| Area | sq. inches | sq. cm | 6.4516 |
| | sq. feet | sq. cm | 0.0929 |
| | sq. yards | sq. km | 2.5899 |
| | acres | hectares | 0.4047 |
| | sq. miles | sq. km | 2.5899 |
| Volume | cu. inches | cu cm | 16.3871 |
| | cu feet | cu m | 0.0283 |
| | | | |
| Weight | ounces (avoirdupois) | grams | 28.3495 |
| | ounces (troy) | grams | 31.1035 |
| | pounds | kg | 0.4536 |
| | tons (long) | tonnes | 1.016 |
| Capacity | pint UK | ltr | 0.5682 |
| | pint US | ltr | 0.4732 |
| | gallons UK | ltr | 4.546 |
| | gallons US | ltr | 3.7854 |
| | fl. ounces UK | ltr | 0.0284 |
| | fl. ounces US | ltr | 0.0296 |

THE COSMOS

PART
05

The Universe

People's concepts of what constitutes the Universe have changed drastically over the ages. At first the Earth was put at the centre of the Universe. Then Earth was found to be just a planet, and thought Sun as the centre. Soon Sun was found to be an ordinary star, which was part of galaxy, and man began to think that galaxy was the Universe. Now scientists believe that there are many galaxies and that clusters of many galaxies make our Universe. Continuing this trend of astronomical upsizing, the latest speculation among astronomers is that maybe the Universe we know is only one of the many - and that there may be many Universes, making a vast Superuniverse.

The Universe was called COSMOS, as opposed to Chaos, when it was first conceived of as an orderly unit, and the studies relating to the Cosmos were known as Cosmogony or Cosmology. Today we speak of them as Space Sciences.

Ancient Cosmology

Ancient civilisations: They had different ideas about what the universe was like. But obviously, people started stargazing long before the early civilisations grew up. When they learned how to write and read they started recording what interested them.

Key Dates: 4000 BC Chinese astronomers record eclipse; 2500 BC Great Pyramid constructed; 2000 BC lines of standing stones at Camac and Stonehenge erected at Salisbury by megalithic observers.

The Babylonians established a calendar based on the regular 29 1/2 day cycle of the phase of Moon. Since 3000BC they used zodiac signs similar to what is in use today. The

ancient Egyptians while building the pyramids aligned them to the patterns in the constellation Orion.

The Greek Astronomers: Astronomy grew in leaps and bounds when many astronomers, philosophers, starwatchers started actively participating and making detailed records. Perhaps the greatest Greek astronomer was Hipparchus of 150 BC, who compiled a catalogue of the positions of more than 800 stars besides establishing a magnitude scale to measure star brightness, still in use.

Key Dates: 585 BC Thales predicts eclipse; 400BC Meton sketches phases of Moon; 200BC Aristarchus proposes Sun-centred universe and Eratosthenes of Cyrene measured the circumference of the Earth, close to present calculations; 150BC Hipparchus compiles a star catalogue and Ptolemy writes *Almagest*.

Aristotle, meanwhile concluded the shape of the Earth was spherical and not flat as commonly believed by masses.

The Arab Astronomers: In c. 820 *Almagest* got translated to Arabic; c. 1428 Ulugh Beigh founds observatory in Samarkand. During those times the famous Arab ruler of Iraq, Caliph Harun Al-Rashid, patronised arts and science.

In Renaissance Europe, the natural scientists and philosophers questioned ancient beliefs, antagonising the church and risking the wrath of the church. However, a moderate Polish priest named Nicholas Copernicus wrote in his book '*De revolution orbium coelestium*' that Sun is the centre of the Universe, marking the beginning of modern astronomy. In 1576 Tycho Brahe, a Danish

lawyer, established Uraniborg observatory and made systematic observations with unprecedented accuracy.

The Indian Astronomers: Aryabhatta, Bhaskaracharya, Varahamira, etc.

Outer Space

The difference between space and outer space is that space means the whole Universe including the Earth while outer space means all space other than the Earth. In fact, outer space begins where the earth's atmosphere ends and extends on and on in all directions.

Outer space is vast. Our terrestrial units of measurement hardly suit its dimensions. So we have evolved new units of measurement like the Light Year and the Astronomical Unit (AU). A Light Year is the distance covered by light in one year in vacuum travelling at a speed of 299,792.5 km per second. The solar system is less than one light-day (the distance light travels in one day) across.

Astronomical Unit represents the mean distance between the Sun and the Earth. Distances within the solar system are measured in AU. Light travels this distance in 8.3

min approx. AU in terrestrial measurements is 149,597,870 km. The distance between the Sun and Pluto, the outermost planet, averages 39 AU. In terms of space dimensions, a Light Year is made up of about 60,000 AUs.

Astronomy

The word is from the Greek astron meaning Star (and nautes meaning sailor). Astronomy is the scientific study of the heavens and all that is therein. It is not to be confused with Astrology which lacks any kind of scientific basis and encompasses the belief that heavenly bodies affect human lives.

Modern astronomy began with Italian astronomer Galileo. In 1609 Galileo heard of the telescope made by the Dutchman Hans Lippershey. He improved upon it and constructed an instrument that could magnify upto thirty diameters. It was this instrument, a refractor telescope, that heralded the era of optical astronomy. Galileo made several startling discoveries. He found that the moon's surface is rugged, and that Pleiades is a group of over 40 stars. He discovered four of Jupiter's moons and observed the sunspots.

Inter-Planetary Manned Mission

After the International Space Station (ISS) is completed, NASA will take up the challenge of exploration beyond low Earth orbit - to the Moon, to Mars and the Solar system. Taking a step further, NASA is expected to test the new Crew Exploration Vehicle (CEV), now rechristened Ares 1, by 2008. NASA will conduct its first manned mission by 2014. Ares 1 will also transport astronauts and scientists to the ISS after the Shuttle fleet is retired.

Ever since Neil Armstrong and Buzz Aldrin became the world's first two human beings to land on the Moon in July 1969, NASA followed it up by sending ten more astronauts to moon. However for more

than three decades now, no human being has visited the Moon. NASA aims to use Ares 1 for returning astronauts to the Moon by 2020 and use the CEV as a stepping stone for sending human beings to Mars and beyond. The goal of this second wave of lunar exploration will be living and working on the moon for increasingly extended periods and to develop new technologies (for example, extraction of Oxygen from the lunar soil), and extract minerals which will reduce costs. An extended human presence on the moon or voyage to Mars will prepare mankind for the ultimate though it will take three months to a three-day journey to Mars.

In 1668 Newton invented a new instrument, the reflector telescope. In a refractor telescope, light is gathered by a large objective lens. In a reflector telescope a large curved mirror is used for this purpose. Both types of optical telescopes are still in use. The invention of the optical telescope was an epoch making event in the history of astronomy.

Key dates: 1609- Galileo pioneers telescopic observation, Kepler publishes his first laws of planetary motion; 1672 Newton demonstrates his reflecting telescope, 1666 Newton formulates his law of gravitation; 1675 Greenwich Observatory founded in London; 1687 Newton's "Principia" published; 1781 Herschel discovers Uranus; Charles Messier publishes his catalogue of nebulae and binary stars in 1802; 1838 Friedrich Bessel measures the distance to a star; 1846 Johann Galle discovers Neptune; 1905 Einstein publishes his special theory of relativity and general theory of relativity in 1916; 1925 Hubble discovers galaxies outside our own; 1930 Clyde Tombaugh discovers Pluto.

Radio Astronomy came into being in the most unexpected manner. In 1931, Karl Jansky, a US radio engineer working with Bell Laboratory, noticed a steady stream of radiation coming in from outer space. However, an amateur radio operator in the U.S., Grote Reber, set out by himself to learn more about this extraterrestrial phenomenon. In 1937, he built the world's first radio telescope—a 9.58 m parabolic dish—and set it up in his backyard at Wheaton, Illinois. In 1940 he produced a radio map of the sky, the first of its kind in the world. Thus a new branch of astronomy was born—Radio Astronomy.

The radio telescope is in many ways analogous to the optical telescope. It consists of a large metal reflector fitted with an antenna. The metal reflector collects and focuses radio energy on to the antenna which can be tuned to any desired frequency. Of all the invisible rays streaming in from outer space, only radio

waves reach us at ground level, through the so-called radio-window. Other rays are blocked by the atmosphere. Radio astronomers pick up radio waves from outer space with specially designed radio telescopes. The signals are amplified billions of times before fed into the computer which analyses them and display the image as False-colour radio pictures.'

Radar astronomy was born in 1940, when a Hungarian physicist Zoltan Bay sent out a beam of microwaves to the moon and recorded the echo.

Satellite astronomy: When Explorer-1 was launched in 1958 by US with a special instrument two doughnut shaped regions of intense radiation around the Earth (called Van Allen Belt) were discovered. This was how satellite astronomy started.

The Invisible rays given out by stars and galaxies belong to the same family of rays. They are all electromagnetic waves, and form what is called the electromagnetic spectrum. The crucial difference between them is that they have different wavelengths (the waves include X-rays, ultraviolet rays, visible light, infrared rays, microwaves and radio waves).

Now satellites have made it possible to study astral phenomena from two levels—from the ground and from above the atmosphere. This has led to the emergence of many specialised fields in astronomy—X-ray, ultra-violet, gamma ray and infra-red.

The Hubble Revolution: The 11 tonne, Hubble Telescope, built at a cost of US \$ 1.5 billion, is the most powerful optical tele-

Planet slang

Ground breaking = new and different;
Earth shattering = it's revolutionary;
Down to earth = no nonsense, unpretentious;
Down and dirty = no frills, basics;
Global = overall; all encompassing.

ever developed and launched in 1990. New Millennium Probe series are the successors to Hubble Telescope.

Galaxies

Galaxies are huge congregations of stars held together by force of gravity. They are so big that they are also called 'island universes'. Studies of distant spaces with optical and radio telescopes indicate that there may be about 100 billion galaxies in the visible Universe. Galaxies seem to be scattered in space. Galaxies tend to be grouped together into clusters, and some clusters appear to be grouped into superclusters. All the galaxies we look at will display red shift in their spectra, indicating they are moving from from us. Current data suggest that the galaxies are moving apart at the rate of 50-100 kps for every million parsecs of distance.

A structural analysis of the known galaxies brings out three major forms—spiral, elliptical, and irregular. Spiral galaxies have a central nucleus with great spiral arms trailing round it. The Milky Way and the Andromeda Galaxy belong to this group. A special type of spiral galaxies is what are called barred spirals which have a central bar as a nucleus. The spirals comprise some 80 % of the galaxies so far known. Elliptical galaxies show purely elliptical shape without any spiral arms. They range in shape from spherical ellipticals to extremely saucer-shaped ones and account for about 17 % of the known galaxies. Irregulars, as the name suggests, show no definite geometric pattern or shape.

The Milky Way The Milky Way is our home galaxy. Our galaxy forms part of a group of about 24 galaxies travelling through space together. On a grand scale, this group forms part of bigger cluster of 1000s of galaxies.

A peculiar feature of this galaxy is a bright band of light that runs almost in a perfect circle through it. Actually it is made up of

Largest Telescopes

- **Refracting (lens) Optical:** Yerkes Obs. - 1m at Williams Bay, WI, USA.
- **Reflecting (mirror) Optical:** Keck - 10m on Mauna Kea in Hawaii (segmented mirror; 2 equal-size telescopes).
- **Space Telescope:** Hubble Telescope - 2.4m.
- **Fully Steerable Radio Dish:** Robert C. Byrd Green Bank Telescope 100m in West Virginia, USA.
- **Single Radio Dish:** Arecibo Observatory- 305m in Puerto Rico.

Radio Interferometer: 10 telescopes of the Very Long Baseline Array, scattered from Hawaii to the Virgin Islands with a resolution equal to a radio dish of 8000 km.

millions of scintillating stars which seen from far away, seems to be placed in close proximity to one another. This river of light is known as the Akash Ganga or Milky Way – the term is now applied to the galaxy as a whole.

The Milky Way is a spiral galaxy. The main body is a disc 100,000 light years across with a globular nucleus of about 16,000 light years in diameter (thick at its centre) and far-stretching spiral arms (in one of which our solar system is located). The Milky Way consists of hundreds of billions of stars rotating about its centre in a stately average period of some 230 million years.

Our galactic nucleus is about 32,000 light years from the Sun. It appears to be a rotating disc of gas. In this rotating disc massive activities are going on. Here, new stars are being born continually. The area is already crowded with full grown stars.

So where is Andromeda? Until recently the Great Nebula in Andromeda, was thought to be part of our Milky Way Galaxy. We now know that Andromeda is an Ex-

as a few hours to as long as 1000 days or more. Generally speaking, the slower the bright-dull-bright cycle, the higher the luminosity.

Quasars are powerful quasi stellar sources of radio radiations.

Pulsars are variable stars which emit regular pulses of electro-magnetic waves of very short duration.

Black Hole

Strange things happen to a star at the end of its life if its mass is more than 3-times the mass of the Sun. It will collapse, becoming more and more compact. The collapse continues until the star becomes so dense that nothing, not even light, can escape from its gravity. Hence the object is dark and can't be viewed directly. According to General Relativity, bodies of matter curve space. If the body of matter was very dense (tons of matter packed into a small space), it convulses space into an infinitely deep chasm, called a black hole. John Wheeler, a US physicist, first used the term 'black hole' for a completely collapsed star at a meeting at the Institute for Space, NY, in 1967.

Size of the Universe

No one knows whether the Universe is finite or infinite in size. Albert Einstein described the Universe as 'finite but unbound,' meaning that the frontiers cannot be observed even though they are definitely there.

Age of the Universe

Cosmology, the science of the large scale structure of the Universe, came of age in the 20th century when Einstein produced in 1915 the general theory of relativity which had sufficient maturity to construct mathematical models of the Universe. The answers to questions about the age of the Universe in the 1930s and '40s was based on Edwin Hubble's

Space Accidents

1960: R-16- Soviet 2-stage rocket exploded in Tyuratam on the launch pad, killing the chief and ground staff;

1966: Gemini 8 - got out of control after docking with orbiting spacecraft Agena, but managed to return alive;

1967: Apollo 1-Three astronauts undergoing training in the command module were killed following a huge fire and asphyxiation. Soyuz 1- Cosmonaut Vladamir Komarov while exiting his failed space mission crashed on to the ground at high speed after both the parachutes failed to open;

1969: Soyuz 5- While preparing for earth re-entry the equipment module not only failed but blocked the heat shield making it out of control. Though it was a near-fatal landing, Cosmonaut Volynov ejected out of the module;

1970: Apollo 13 suffered an oxygen tank explosion losing its main power supply while on moon mission. The crew was rescued using the lunar lander;

1971: Soyuz 11- Three Cosmonauts died while trying to separate the re-entry capsule and the spacecraft through an explosion which resulted in leakage of oxygen chamber;

1980: A Vostok rocket exploded on the launch pad while refueling, killing 50 at Plesetsk Space Centre, Russia;

1986: Space Shuttle Challenger: six astronauts including a high school teacher died in a fuel tank explosion;

2003: Colum¹ Shuttle broke up on re-members includ.

Hubble's successor

The James Webb Space Telescope (JWST) is the crown jewel of NASA's space-science program for the next decade. Its mission is to uncloak the invisible structures of the early universe. With a gold-coated primary mirror that is seven times larger than Hubble's, besides instruments sensitive to infrared radiation, JWST is intended to answer questions raised by Hubble's galaxy-stuffed deep-field sky surveys. It will peer at what lies beyond.

The telescope's most impressive feature is sheer size. At the observatory's

base is a five-layer Sun and micrometeorite shield that is as large as a tennis court. Perched above, panels fit together like flower petals to render the telescope's 6.5 meter prime mirror. No launch vehicle is big enough to carry the telescope as it is, so it's designed to unfold in orbit, as in origami.

The JWST was displayed in Orlando, Florida, where the International Society of Optical Engineering wrapped up its biannual conference in 2006. The project cost is \$4.5 billion and is scheduled for launch in 2013.

own measurements of his constant. The current estimate of the age of the Universe is about 13 billion years. The 60 odd- years following Hubble's original findings have seen numerous revisions of the constant. It was in the midst of this chaos that the Hubble space telescope was launched in 1990, rightly chose as its key project – the measurement of the Hubble constant. The space telescope has

a decided edge over ground-based telescope in imaging and resolution of very faint objects.

The Hubble's constant as measured by the space telescope was on the high side implying a rather young Universe – also depending on what theoretical mode is accepted. Scientists say the Universe could be just 8 billion years old if the Hubble constant is precisely 80.

The Solar System

The Solar System is centred on the Sun. It consists of a star called the Sun and all the objects that travel around it. The Solar System includes: • 8 planets (*Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune*) and 4 Dwarf planets - *Pluto, Charon, Eris, Ceres* - along with the numerous satellites that travel around most of them • planet-like objects called *asteroids* (hundreds of asteroids) • chunks of iron and stone

called *meteoroids* • bodies of dust and foreign gases called *comets* (thousands of comets); and • drifting particles called *interplanetary dust* and electrically charged gas called *plasma* that together make up the interplanetary medium.

Interplanetary Space The whole solar system by volume appears to be an empty void. This vacuum of "space" comprises the interplanetary medium. It includes various forms

nts: interplanetary dust and interplanetary gas. Interplanetary dust consists of microscopic solid particles. Interplanetary gas is a gaseous flow of gas and charged particles, mostly protons and electrons—plasma—which stream from the Sun, called the solar wind. The solar wind can be measured by spacecraft, and it has a large effect on comet tails. It also has a measurable effect on the motion of spacecraft, communication systems on Earth, electrical transmission, etc. The speed of the solar wind is about 400 kilometres per second in the vicinity of Earth's orbit. The point at which the solar wind meets the interstellar medium, which is the "solar" wind from other stars, is called the *heliopause*—is an imaginary boundary theorised to be roughly circular or teardrop-shaped, where the Sun's influence ceases, at perhaps 100 AU from the Sun. The space within the boundary of the heliopause, containing the Sun and Solar System, is referred to as the *heliosphere*. The solar magnetic field extends outward into interplanetary space; it can be measured on Earth and by spacecraft. The solar magnetic field is the dominating magnetic field throughout the interplanetary regions of the solar system, except in the immediate environment of planets which have their own magnetic fields.

Kuiper Belt

The Kuiper Belt is a disk-shaped region just outside the orbit of Neptune roughly 30 to 100 AU from the Sun containing many small icy bodies. It is named after Gerard Kuiper, who proposed its existence in 1951. This huge "spherical" cloud^{*} is now called the Oort Cloud, after Jan Oort, because of billions of comets orbiting the Sun much beyond the outermost planet. The Oort Cloud may account for a significant fraction of the mass of the solar system.

Kuiper Belt objects & the Oort Cloud Jan Oort's orbital calculations done in 1950

| SOLAR DATA | |
|--------------------------------------|---------------------------|
| Distance from the Earth [*] | 149.6 million km |
| Absolute Visual Magnitude | 4.7 ⁺ |
| Diameter | 1,394,000 km |
| Core Temperature | 15 000 000 K |
| Photosphere Temperature | 5770 K |
| Rotation as seen from the Earth | |
| (at the Equator) | 25.38 days |
| (near the poles) | 33 days |
| Chemical Composition | |
| Hydrogen | 71% |
| Helium | 26.5% |
| Other Elements | 2.5% |
| Age | 4.5 billion years approx. |
| Expected lifetime of a normal star | 10 billion years approx. |
| Mass | 330,000x Earth's mass |

* The mean distance from the Earth to the Sun (150 million km) translated into flying hours means that a jet aircraft capable of 1000 km/hr would need more than 17 years of non-stop flying to reach the Sun.

showed that a huge spherical "cloud" (now called the Oort Cloud) of perhaps a trillion or more comets orbit the Sun far beyond the orbit of Pluto from about 30,000 AU to a light-year or more. This is the source of the long-period comets. It is now considered to be source of the short-period comets of less than 200 years. Occasionally the orbit of a Kuiper Belt object will be disturbed by the interactions of the giant planets in such a way as to cause it to cross the orbit of Neptune. There are presently few known objects orbiting between Jupiter and Neptune. The IAU has designated this class of objects as Centaurs. These orbits are not stable and their destiny is not known. Those that didn't escape entirely formed the distant Oort Cloud. Small objects formed farther out had no such interactions and remained as the Kuiper Belt. Several Kuiper Belt objects have been discovered recently. They appear to be small icy bodies. It is estimated that there are at least 35,000 Kuiper Belt objects greater than 100

km in diameter, which is several hundred times the number (and mass) of similar sized objects in the main asteroid belt.

Origin

The Solar System originated in a primitive solar nebula—a rotating disc of gas and dust. It is from this rotating disc that the planets and the rest of the Solar System evolved. The Solar System is also tucked away in a corner of the Milky Way at a distance of about 30,000 to 33,000 light years from the centre of the galaxy.

The Sun contains 99.85% of all the matter in the Solar System. The planets which condensed out of the same disk of material that formed the Sun, contains only 0.135% of the mass of the Solar System.

Jupiter contains more than twice the matter of all the other planets combined. Satellites of the planets, comets, asteroids, mete-

oroids, and the interplanetary medium constitute the remaining 0.015%.

[Sun- 99.85%;
Planets- 0.135%;
Comets - 0.01%;
Satellites- 0.00005%;
Meteoroids- 0.0000001%;
Interplanetary medium- 0.0000001%]

The Sun

The Sun is one of more than 100 billion stars in the giant spiral galaxy called the Milky Way. The Sun is the centre of the Solar System. Its mass is about 740 times as much as that of all the planets combined. The huge mass of the Sun creates the gravitation that keeps the other objects travelling around it in an orderly manner.

The Sun continuously gives off energy in several forms—visible light; invisible Infrared, ultra-violet, X-rays and gamma rays, cosmic

Droids on the ISS

Tiny satellites are a hot new idea in space exploration. Instead of launching one big, heavy satellite to do a job, why not launch many little ones? Droids can orbit Earth in tandem, each doing their own small part of the overall mission. If a solar flare zaps one satellite: no problem! The rest can close ranks and carry on. Launch costs are reduced, too, because tiny satellites can be packed alongside larger payloads, getting to space almost free of charge. Of course, there is a problem: flying in formation is trickier than it sounds and getting a group of orbiting satellites to do a formation is extremely hard.

NASA has already sent one of the three droids to the ISS. The initial challenge was to design a small, roughly spherical robot that could float aboard the ISS and manoeuvre using compressed CO₂ thrusters. The project, called SPHERES

(Synchronised Position Hold Engage Reorient Experimental Satellite), serves as a test bed for trying out experimental software to control clusters of satellites.

The first SPHERE arrived on the ISS in April 2006 tucked inside a Progress supply rocket. Eventually two more SPHERES, differentiated by colour, would go on the future shuttle missions. "Red" is already busy. Scientists have commanded it to do a variety of manoeuvres—loops and turns. Astronauts tried to trick Red by causing one of its thrusters to stick "on." The robot diagnosed the fault, turned the thruster off, and returned to station-keeping.

In the future, NASA may use the technique to assemble a moon-ship piece by piece in Earth orbit. The software designed to control small satellites could just as well be used to manoeuvre the pieces of a spaceship together.

Solar System: As we know

Planet Superlatives

| | |
|-------------------------------|---------|
| Largest, most massive planet: | Jupiter |
| Fastest orbiting planet: | Mercury |
| Longest (synodic) day: | Mercury |
| Most Moons: | Jupiter |
| Planet with largest moon: | Jupiter |
| Greatest av. density: | Earth |
| Tallest mountain: | Jupiter |
| Strongest magnetic fields: | |

| | |
|----------------|--|
| Venus | |
| Jupiter | |
| Venus | |
| Mercury, Venus | |
| Neptune | |
| Saturn | |
| Jupiter | |
| Earth | |

| | |
|---------------------------------------------|--|
| Most circular orbit: | |
| Shortest (synodic) day: | |
| Hottest Planet: | |
| No Moons: | |
| Planet with moon with most eccentric orbit: | |
| Lowest av. density: | |
| Deepest oceans: | |
| Greatest amount of liquid on the surface: | |

The Nearest Stars

| Star | Distance
(light years) |
|-------------------------------|---------------------------|
| 1. Proxima Centauri | 4.24 |
| 2. Alpha Centauri A & B | 4.34 |
| 3. Barnard's Star | 5.97 |
| 4. Wolf 359 (CN Leonis) | 7.80 |
| 5. Lalande 21185 | 8.19 |
| 6. UV Ceti A & B | 8.55 |
| 7. Sirius A & B | 8.67 |
| 8. Ross 248 (HH Andromedae) | 10.37 |
| 9. Gliese 581 (HD Andromedae) | 11.22 |
| 10. 61 Cygnus A & B | 11.22 |

Total Solar Eclipses 2002-2010

| Date | Visible from parts of |
|--------------|---------------------------------|
| 4 Dec, 2002 | S. Africa, Australia |
| 23 Nov, 2003 | Antarctica |
| 8 Apr, 2005 | SE Pacific, C. America |
| 29 Mar, 2006 | C. Atlantic, W. Africa, C. Asia |
| 1 Aug, 2008 | Greenland, NE Asia |
| 22 Jul, 2009 | S. Asia, C. Pacific |
| 11 Jul, 2010 | S. Pacific |

Dwarf Planets

| | |
|--------------------------------------|--------------------------------------|
| Pluto | Orbit |
| Diameter: 2,360 km | Charon, largest of the three moons |
| Moons: 3. Charon, Nix, Hydra. | of Pluto, is a large icy body in the |
| Density: 2.06 g/cm cube | Kuiper Belt - |
| Average distance to the Sun: | amongst thousands of floating |
| 5,865.6 million km | bodies - beyond Neptune. |
| Time to orbit the sun: 247.70 years. | |

| | |
|----------------------------------|--|
| Ceres | |
| Ceres, discovered in 1801, the | |
| first asteroid discovered in the | |
| asteroid belt between Mars and | |
| Jupiter, to be considered as a | |
| 'planet' | |

| | |
|---------------------------------------------------|--|
| Eris (2003 UB313 / Xena) | |
| Nicknamed Xena, | |
| Diameter: 2,397 kms (approx.), It is slightly | |
| bigger than Pluto - an icy body that resides in | |
| the Kuiper Belt - with thousands of floating ice- | |
| balls. | |

Uranus

Diameter: 52,096 km.

Moons: 27.

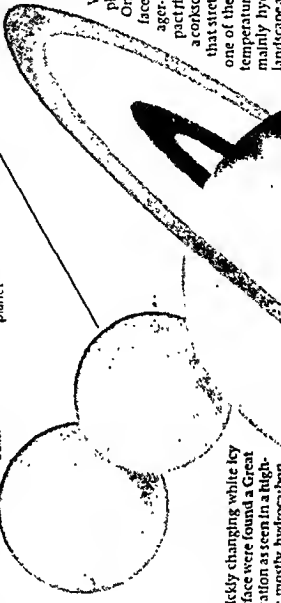
Density: 1.32 g/cm cube
Average distance to the Sun (km): 2,852.8 million
Time to orbit the Sun: 84.01 years.

Watery Uranus is the only planet that lies on its side. One pole, then the other, faces the Sun as it orbits. Voyager-II found nine dark, compact rings around the planet and a cork-screw-shaped magnetic field that stretches millions of kms. It is one of the coldest. With an average temperature of -223°C. It is made of mainly hydrogen and has a barren landscape and is from frozen methane.

Neptune

Diameter: 49,000 km.
Moons: 13. Triton is the largest
Density: 1.64 g/cm cube
Average distance to the sun: 4,497 million km.
Time to orbit the sun: 164.80 years.

It is denser & little smaller than Uranus. Neptune's atmosphere appear blue, with quickly changing white icy methane clouds often suspended high above an apparent surface. In that apparent surface were found a Great Dark Spot, a giant storm where winds blow at 2000 km/h. It has a counter-clockwise rotation as seen in a high-pressure system in the Jupiter's southern hemisphere. Atmosphere constituents are mostly hydrogen, helium, methane, and ammonia.



Saturn

Diameter: 119,296 km.
Moons: 31.
Density: 0.69 g/cm cube
Average distance to the sun: 1,417.6 million km.

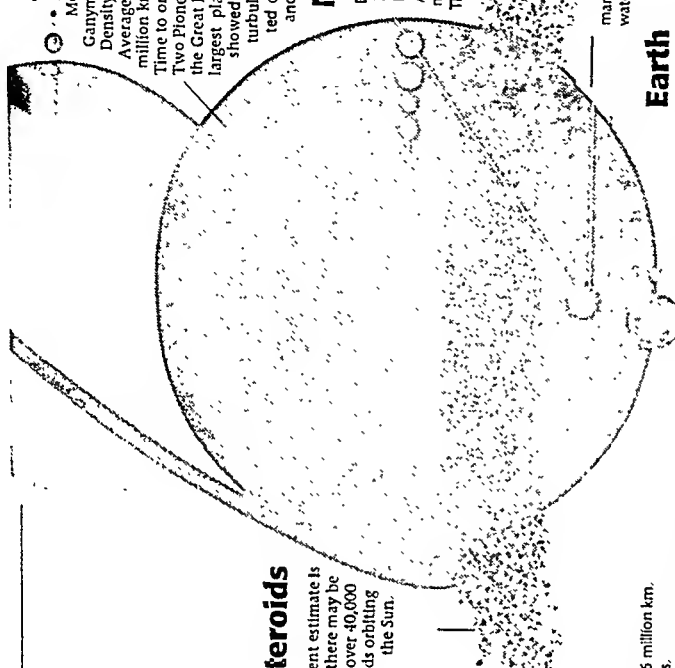
Time to orbit the sun: 29.46 years.
Second largest planet of the Solar System. Voyager 1 found that the celebrated rings of the golden giant Saturn are composed of thousands of rippling, spiralling bands of icy rock and dust. Just 2000m thick and 270,000 km in diameter. The moon Titan has a nitrogen atmosphere and hydrocarbons – the necessities of life – but no signs of Titanites.

Annual Major Meteor Showers

| Name | Dates of Hourly rate maximum |
|----------------|------------------------------|
| Quadrantids | 3-4 Jan |
| Lyrids | 21-22 Apr |
| Eta Aquarids | 5-6 May |
| Delta Aquarids | 28-29 Jul |
| Persids | 12-13 Aug |
| Orionids | 22 Oct |
| Taurids | 4 Nov |
| Leonids | 17-18 Nov |
| Geminids | 13-14 Dec |

Asteroids

A recent estimate is that there may be well over 40,000 asteroids orbiting the Sun.



Jupiter

Diameter: 141,968 km.
Moons: 60. (4 large ones – Ganymede, Callisto, Io, Europa)
Density: 1.33 g/cm cube
Average distance to the sun: 772.8 million km.

Time to orbit the sun: 11.86 years.
Two Pioneer space probes photographed the Great Red Spot on the solar system's largest planet. Voyagers 1 and 2 later showed it is an enormous eddy in the turbulent cloud cover. They also spotted dusty rings, three new moons and volcanoes on the Moon, Io.

Mars

Diameter: 6,753.2 km.
Moons: 2. Phobos, Deimos
Density: 3.93 g/cm cube
Average distance to the Sun: 225.6 million km.

Time to orbit the sun: 687 days.
The Viking probes or pathfinders failed to find any sign of life. Beneath its thin atmosphere, Mars is barren, covered with pink soil and boulders. Long ago it was more active: the surface is marked with dormant volcanoes and deep chasms where water once freely flowed.

Earth

Diameter: 12,739.2 km.
Moons: 1.
Density: 5.52 g/cm cube.
Average distance to the sun: 149.8 million km.
Time to orbit the sun: 365.30 days.
Estimated Weight (mass) (5,940,000,000,000,000,000 metric tons)
Estimated Age 4.5 billion years
Surface Area (510,066,000 sq km)
The only planet in the solar system to support life.

Venus

Diameter: 12,032 km.
Moons: none.
Density: 5.24 g/cm cube
Average distance to the sun: 107.52 million km.
Time to orbit the sun: 224.70 days.

Mercury

Diameter: 4,849.6 km.
Moons: none.
Density: 5.43 g/cm cube
Average distance to the sun: 57.6 million km.
Time to orbit the sun: 87.97 days.
Tiny Mercury, slightly larger than Earth's moon, races along its elliptical orbit at 176,000 km per hour – a speed that keeps it from being drawn into the sun's gravity field. The cratered planet has no atmosphere; days are scorching hot and nights, frigid. It has the greatest temperature extremes, ranging from -200°C to 430°C. Its gravity is very weak (compared to Earth).

Sun

Diameter: 1,384,000 km.
Age: 4.5 billion years.
Planets: 8
Dwarf planets: 4. Pluto, Charon, Eris, Ceres
Density: 1.41 g/cm cube
A rather ordinary, middle-age star, the gaseous sun may reach a temperature of 15.4°C million degrees Celsius at its core.

disappear. Gases often shoot up violently from the surface.

Solar activity has been observed to follow a 11-year cycle. Owing to the Sun's rotation, the solar wind travels in spirals and carries with it magnetic fields. The Earth's magnetic field—the magnetosphere—acts as a shield against the ever-blowing solar wind and deflects it away from the Earth. Nevertheless, particles of solar wind sometimes pierce the magnetic shield and enter the upper atmosphere, where, like the solar flares, they cause auroral displays.

The solar wind distorts the shape of the magnetosphere. The magnetosphere extends to a distance of 64,000 km above the Earth—10 times the radius of the Earth. On the part of the Earth exposed to the Sun (the sunlit side), the solar wind sweeps along the magnetosphere past the Earth. On the other side of the Earth (the night side), the solar wind converges again and compresses the magnetic field into a plume or tail, more or less like what it does to comets. The tail thus formed extends to over 6 million km on the night side of the Earth.

Sunspots are dark patches noticed on the surface of the Sun. They appear dark because they are cooler (around 1500°C) than the surface of the Sun which has a temperature of about 6000°C. The largest spot ever measured (April, 1974) covered 18,130 million sq kms or approximately 0.7 % of the Sun's visible surface. The life periods of these spots also vary. They may last from a few hours to many weeks.

Polar Auroras are two auroras, the Aurora Borealis or Northern Lights and the Aurora Australis or Southern Lights. These are lights that sweep across the sky in waves or streamers or folds. They are very often multi-coloured and provide one of the finest spectacles in nature. They occur in the Arctic and the Antarctic regions respectively. But the Northern Lights can be seen as far south as

New Orleans in America and the Southern Lights as far north as Australia.

The magnetosphere is the earth's magnetic shield. It was at first called the *Van Allen Belts* after the American physicist, James Van Allen who discovered them in 1959. Van Allen, in analysing the data from the earlier Explorer and Pioneer rockets found two belts of high intensity radiation in the upper atmosphere. Pioneer 12 later showed that these belts were a part of a large band of radiation called the magnetosphere. It extended far out to about 64,000 kilometres from the Earth's surface.

The Planets

The planets are large celestial bodies in orbit around a star, composed of rock, metals and gases. In the Solar System, the inner planets are Mercury, Venus, Earth and Mars. The Earth is the largest of the inner planets and the densest of all planets. All the inner four planets are dense rocky bodies and are collectively called *terrestrial planets* (Earth-like). They appear to chiefly consist of iron and rock.

The outer planets, Jupiter, Saturn, Uranus and Neptune are very big (sometimes called *giant planets*), with large satellite families. They are composed mostly of hydrogen, helium, ammonia and methane. These planets are called Jovian, after Jove, the Greek name for Jupiter, because they resemble Jupiter in many aspects. The two largest planets, Jupiter and Saturn send out radiation. Jupiter's radio waves are so strong that they can be picked up on Earth by radio telescopes. All of them rotate furiously, have dense atmospheres and consist of far lighter elements (contain little iron and rock) than the terrestrial inner planets. The outermost planet Pluto is in a class by itself. It is supposed to be a dense planet like the inner planets, although it is the farthest of the outer planets.

Rotating on their own axes, the planets

sible for the tides on earth. The Moon, being nearer to the Earth than the Sun, exerts a greater influence on the tides. It takes only 1.3 seconds for moonlight to reach the Earth, whereas sunlight takes as much as 8 minutes 16.6 seconds to reach us. This being so, the ratio of lunar and solar power for tide-raising is 11 to 5.

The oldest rocks and soil samples from the Moon are about the same age as the Earth (about 4,600 million years old). The rocks from the maria turned out to be basaltic lava, similar to volcanic rocks found on the Earth.

A surprising finding was, while terrestrial igneous rocks contained only about 1% of titanium, the lunar rocks showed 10 times as much. A few minerals unknown on Earth were found in the mare (dark areas on the Moon basalts. Among these is Armalcolite, a new name derived from the names of the astronauts—Armstrong, Aldrin and Collins and the name of the area Tranquillitis.

The lunar rocks were bone-dry, with no trace of water in any form and no trace of any organic matter. So also, volatile elements (elements with low boiling points) like Sodium, Potassium, Chlorine, Germanium, Lead and Mercury were practically non-existent. The depletion of Sodium and Potassium is significant, because these two are among the most abundant elements found in terrestrial rocks.

Comets

Comets probably derive their name from their tail, as in Latin 'comets' means "long-haired." Comets may originate in a huge cloud called the Oort Cloud that is supposed to surround Solar System. Extremely bright comets such as Hale-Bopp are rare. Not all comets have tails. The tail takes shape only when the comet gets close to the Sun. When first viewed through a telescope the bright head of a comet, called *Coma*, looks like a hazy dot. Sometimes a coma contains a star-like point called a *Nucleus*. The nucleus of a

comet is extremely small. Solar energy warms comet's head as it moves sunward and vapourises the frozen-crystallised gases. These gases stream out and form a spectacular, glowing tail behind the comet's head. As the comet approaches the Sun the solar wind, which consists of high-speed atomic nuclei, protons, and electrons, sweeps cometary gases away from the Sun, producing a straight tail of up to 150 m kms in length. At maximum size the tail may be 250m km in length. The tail attains maximum length and brightness soon after the comet has passed its perihelion. Some comets may become so bright as to be visible even in daylight. Comet tails always point away from the Sun because of the force exerted by solar wind and radiation on the cometary material. If the supply of gases from the nucleus changes, a comet can brighten or fade unexpectedly, making it difficult for astronomers to predict how bright a comet will become. (When the comet approaches the Sun the tail follows the head and when it recedes, the tail precedes the head.) Sometimes a second tail consisting of dust particles may also appear. This dust tail is shorter and more curved than the gas tail. Some comets have been observed to develop as many as nine tails.

Planet Names

The planets were named after the Roman gods:

| | |
|---------|-----------------------------------|
| Mercury | god of commerce, eloquence, skill |
| Venus | goddess of spring, bloom, beauty |
| Mars | god of war |
| Jupiter | ruler of gods and all men |
| Saturn | god of agriculture |
| Uranus | god of heavens |
| Neptune | god of the sea |
| Pluto | god of the under world and death |

Pluto Downgraded

On August 24 2006, about 2,500 scientists at The International Astronomical Union's (IAU) meeting in Prague adopted historic new guidelines that demoted Pluto - the smallest, and most distant planet, to a secondary category.

The status of Pluto discovered in 1930 by the American Clyde Tombaugh, has been contested for many years.

In the Czech capital, astronomers waved yellow ballot papers in the air, in the IAU vote - and in the process took the historic decision to relegate Pluto.

The need for a strict definition was deemed necessary after new telescope technologies began to reveal far-off objects that rivalled Pluto in size. Without a new nomenclature, these discoveries raised the prospect that textbooks could soon be talking about 50 or more planets in the Solar System.

The scientists agreed that for a celestial body to qualify as a planet, it ...

- must be in orbit around the Sun
- must be large enough that it takes on a nearly round shape
- has cleared its orbit of other objects because its highly elliptical orbit overlaps that of Neptune
- has to dominate its orbit around the Sun in the same way as the other planets.

Pluto will now on be referred to as a "dwarf planet". The critical blow for Pluto came with the discovery three years ago of an object currently designated 2003 UB313. Hubble Space Telescope measured 2003 UB313, also called Xena, in diameter slightly bigger than Pluto: 2390 kms and 2360km respectively. 2003 UB313 now joins Pluto

in the dwarf planet category, along with Pluto's major moon, Charon, and the biggest asteroid in the Solar System, Ceres.

The Other Definitions:

Dwarf planet: A planet smaller than Mercury (diameter: 4879 kilometres), which is the smallest uncontested planet. It would include the former asteroid Ceres, Pluto, Charon and Xena.

Pluton: A planet orbiting beyond Neptune, taking more than 200 earth years to circle the Sun. So far, it would include Pluto; Pluto's former moon, Charon; and "Xena" (2003 UB313).

Satellite: Anything orbiting a planet, as long as the mutual centre of gravity does not fall outside the planet. It includes several bodies much larger than many planets, such as Jupiter's moon Ganymede (diameter: 5262 kilometres).

Small solar system body: Anything orbiting the Sun that's not a planet or a satellite. Most asteroids and comets would be SSSBs. Currently they are called minor planets.

Unofficial categories of planet:

Giant planets: Jupiter, Saturn, Uranus and Neptune.

Classical planets: The four giant planets plus the familiar four rocky, terrestrial planets: Mercury, Venus, Earth and Mars.

Dwarf Planets

| | |
|--------------------|------------|
| Pluto | : TNO |
| Charon | : TNO |
| 2003 UB 313 (Xena) | : TNO |
| Ceres | : Asteroid |

*TNO = Trans Neptune Objects in the Kuiper Belt

The Earth

The earliest systematic theory of the Universe was the geocentric (geo = Earth) theory. According to this theory, the Earth is the unmoving centre of the universe, round which the Sun and the stars and all other heavenly bodies revolve.

Sir Isaac Newton (1642-1726) dealt the last blow at the geocentric theory. He formulated the law of gravitation and correlated it with his laws of motion. His book *Philosophiæ Naturalis Principia Mathematica* (known shortly as *Principia*) marks a turning point in the history of astronomical thought.

Modern theories on the formation of the Earth and other planets are of course based on the Copernican theory.

The age of the Earth was a matter of speculation till very recent times. It was only about 200 years ago, that scientific enquiries were started by geologists. According to their deductions, based on the study of rocks, the age of the Earth is 4.6 billion years.

Globe

A globe is a small model of Earth, shaped oblate spheroid - flattened at the top and bottom and bulging in the middle. In order to represent the Earth accurately, a grid of imaginary lines with equal interval is prepared. Imaginary lines that runs east and west around Earth, parallel to the equator, are called parallels/

latitudes. They pin-point the exact location of a place, or how far it is from the equator. Equator is constant at 0 degree latitude, equidistant from both poles. Moving farther north or south, the latitude increases. The North Pole is at 90 degrees north latitude. The South Pole is at 90 degrees south latitude. 23 and half degrees North latitude is called the Tropic of

| Earth Data | |
|-------------------------------------------------------------------------------------------------------------------|--------------------------|
| Surface area | 510,130,500 sq km |
| Land surface (29.1%) | 149,950,300 sq km |
| Ocean surface (70.9%) | 360,149,700 sq km |
| Total water area | 360,672,300 sq km |
| Type of water | 97.9% salt, 2.1% fresh |
| Equatorial circumference | 40,075 km |
| Polar circumference | 39,940 km |
| Equatorial diameter | 12,756 km |
| Polar diameter | 12,714 km |
| Equatorial radius | 6,378 km |
| Polar radius | 6,357 km |
| Mass (estimated weight) | 5,940,000,000,000,000 kg |
| Mean distance from the Sun | 149,597,870 km |
| Earth's Orbit Speed (around Sun) | 107,320 km/hr |
| Period of Revolution (around the Sun) | 365.256 days |
| Time of Rotation (on its own axis) | 23 hr 56 min 4.09 sec |
| Inclination of the axis (from the plane of the ecliptic) | 23.5° |
| Speed of Rocket (i.e. velocity required to counter earth's gravity and take up into the atmosphere) | 11,200 m/sec |
| Escape Velocity (i.e. speed necessary to break away from the Earth's gravitational pull) | 11,200 m/sec |
| Composition of the Earth | |
| Aluminium (7.4%), Sulphur (2.7%), Oxygen (46.6%), Silicon (22.3%), Calcium (2.5%), Iron (33.5%), Magnesium (17%), | |

Cancer and 23 and half degrees South latitude is called Tropic of Capricorn.

There are two times in a year when the Sun is furthest North or South of equator: summer solstice, ie, 21 June with longer day time in N. Hemisphere or winter solstice, ie, about 22 December with longer night time in the N. Hemisphere. Similarly there are two times in year, either around 21 June (spring/vernal equinox) and 22 September (vernal equinox), when the Sun crosses the equator and we have day and night of equal length or duration.

Imaginary lines that run north and south around the globe, from one pole to the other, are called meridians/longitudes. They inform us the degree of longitude, or how far east or west a place is from an imaginary line called the Greenwich meridian or prime meridian (0 degree). 180 degree is called the International Date Line crossing which a date changes.

Inside Earth

Our knowledge of the internal structure of the Earth is derived from studies of earthquakes. The shock waves sent out by an earthquake indicate the physical nature of the regions through which they pass. These studies show that the centre of the Earth is a solid core—the *Inner Core*. The density of this core is about 13 g to the cubic centimetre. The Inner Core is about 1370 km thick and is surrounded by an *Outer Core* of around 2,080 km. The Outer Core appears to be molten.

The Outer Core is surrounded by the Mantle which has a thickness of around 2900 km. The Mantle is topped by the crust of the Earth, which varies widely in thickness—from 12 to 60 km. At the centre or the Inner Core, that is at a depth of some 6,370 km, temperature goes up to some 4,000°C and pressure reaches nearly 4 million atmospheres.

The mantle is important in many ways. It accounts for nearly half the radius of the Earth (2900 km), 83% of its volume and 67% of its

mass. The dynamic processes which determine the movements of the crust plates are powered by the mantle.

Starting at an average depth of from 45 to 56 km below the top surface of the Earth, the mantle continues to a depth of 2,900 km where it joins the outer core. The mantle is a shell of red hot rock and separates the Earth's metallic and partly melted core (both the inner and the outer cores) from the cooler rocks of the Earth's crust.

It is composed of silicate minerals rich in magnesium and iron. The density of the mantle increases with depth from about 3.5 grams per cubic centimetre to around 5.5 grams, near the outer core.

The upper portion of the mantle, about 250 km thick, is called the Asthenosphere. Here the rocks are partially melted, with thin films of liquid distributed between the mineral grains. The red hot nature of the lower mantle and the partially melted nature of the upper mantle (asthenosphere) combine to make the whole mantle plastic or yielding. It is on this plastic base that the top crust of the Earth (of oceans and continents) that is to say, the lithosphere, rests. The lithosphere is distinguished from the asthenosphere by the fact that it is cooler and therefore, more rigid.

The top layer of the lithosphere virtually floats on the asthenosphere. Like other floating bodies the crust seeks an equilibrium riding deeper where it is heavier and rising higher where it is lighter. The mountains on the crust have deep roots of light material to support them and when the load on any part of the crust changes, the surface responds by rising or sinking to restore the equilibrium.

The outer surface of the Earth is divided into 4 spheres:

Lithosphere means the entire top crust of the Earth and includes not only the land surface but also the ocean floor.

Hydrosphere is the water surface which includes the oceans, lakes and rivers.

Atmosphere is the blanket of air that envelops the Earth. It covers both the land surface and the water surface.

Biosphere is the sphere of life which spreads over all the three other spheres.

Seasons

The earth's axis is inclined at an angle of 66.5° to the plane of its orbit. As a result of this, the earth is in different positions while revolving around the sun. During the first half of the year the northern hemisphere tilts towards the sun resulting in the season of summer in the region. During the second half of the year the southern hemisphere tilts towards the sun, and thus experiences summer and the northern hemisphere experiences winter during this period.

The revolution causes the four seasons

(a) **Spring** When the sun is directly overhead the equator (b) **Summer** When the sun is directly over the tropic of Cancer—the North Temperate Zone experiences summer. (c) **Autumn** When the sun returns to the equator, the North Temperate Zone experiences the season of autumn. (d) **Winter** The sun is at the tropic of Capricorn and the north temperate zone experiences winter.

Equinoxes are dates when the nights and days are equal. During these days the sun shines directly over the equator. March 21 is called vernal equinox and September 23 is called autumnal equinox.

Solstice The time of the year when the difference between the length of days and nights is the largest is referred to as solstice.

On or around June 21, the North Pole tilts towards the sun and the sun shines directly over the tropic of Cancer which is called summer solstice. On or around December 22, the earth is at the opposite end of its orbit, as a result, the South Pole tilts towards the sun and the North Pole away from it. This is called winter solstice.

Eclipses When the light of the sun or the

moon is obscured by another body the sun or moon is said to be in eclipse.

Lunar Eclipse When the earth comes between the moon and the sun, the shadow cast by the earth on the moon results in a lunar eclipse. Lunar eclipse occurs only on a full moon day but not on every full moon day.

Solar Eclipse When the moon comes between the sun and the earth, it causes obstruction of the sun's light when viewed from the earth and is called solar eclipse. A solar eclipse occurs on a new moon day when the moon is in line with the sun. However, solar eclipse does not occur on every new moon day.

Midnight Sun: In the Arctic and Antarctic region around mid-summer when the sun sets, the sun does not go below the horizon throughout the 24 hours. The sun may be seen at midnight too. This is due to the inclination of earth's axis to the plane of orbit. Norway is called the land of midnight sun, seen between May and July. In the Southern hemisphere, the phenomenon is seen in Antarctica.

Lithosphere

The lithosphere is the top crust of the Earth on which our continents and ocean basins rest. It is thickest in the continental regions where it has an average thickness of 40 km and thinnest in the oceans where it may have a maximum thickness of 10 to 12 km.

Mohorovic Discontinuity: An imaginary line that separates Mantle and Crust.

Gutenberg-Wiechert Discontinuity: A separation between the Mantle and the Core.

It constitutes about 1% of the Earth's volume and 0.4% of its mass. Though the lithosphere technically includes both the land mass and the ocean floor it is often used to indicate only the land surface. Regarded thus, the lithosphere forms only 3/10 of the total surface of the Earth. The rest 7/10 is taken up by the oceans.

As we see it today, the topmost portion of the land surface is sand and soil except where

rocky outcrops show. All the sand and much of the soil that we see have derived from ancient rocks.

The contours of the landscape are largely conditioned by the rocky substructure of the lithosphere. Geologically speaking, all materials that make up the crust of the Earth are rocks, whether they are big granite boulders, combustible coal, soft clay or loose fragments of gravel or sand. Rocks which form the substructure of the lithosphere may be broadly grouped into three classes: (i) Igneous rocks (ii) Sedimentary rocks and (iii) Metamorphic rocks.

We know that the face of the Earth, that is, its visible surface has undergone radical changes in the past. Geologists explain these changes as the consequence of the cooling and contraction of the Earth, through thousands of years. This explanation seemed quite unsatisfactory to a German scientist, Alfred Wegener (1880-1930).

In 1915, Wegener published a book *The Origin of Continents and Oceans* in which he advanced the theory of Continental Drift. He theorised that the changes on the Earth surface were mainly due to the shifting of continents.

Continental Drift*

The theory of Continental Drift assumes that the continents plough through the oceans like massive ships.

A. 350 million years ago During the early carboniferous period large continental masses, Laurasia in the north, and Gondwanaland in the south, began drifting towards each other. Britain and much of western Europe lay in equatorial latitudes.

B. 200 million years ago In the late carboniferous period Laurasia and Gondwanaland collided, creating the super-continent

Pangaea, (and a great ocean called Panthalassa) which remained largely intact until late Triassic times. A large gulf called Tethys opened up in the regions we now recognise as the Mediterranean and the Alpine-Himalayan mountain belts.

C. 50 million years ago During the Eocene period the fragmentation of Pangaea was well advanced and continents and oceans began to look as they do today. The Atlantic Ocean widened, the Tethys Ocean narrowed, while the Indian continents isolated and exposed to a northerly drift, was later to collide with the north Asia.

D. Present Day The northward movement of much of the Earth's continental masses continues. Changes since Eocene period include the continued growth of the Atlantic Ocean, the collision of the Indian continent with both Asian mass and the separation of Antarctica and Australia.

E. 50 million years ahead Scientists predict still further widening of the Atlantic Ocean with continued spreading of the Red Sea and an accompanying closure of the Persian Gulf. It seems likely that a new ocean could evolve in the East African rift system and that East Africa and Australia will drift to the position north of the Equator with Antarctica positioned more or less in South-pole.

Plate Tectonics

Plate Tectonics tells us that it is not only the continents that are in motion, but the oceans as well. This is so, because the top crust of the Earth is not a complete single shell of granite and basalt, but a mosaic of several rigid segments, called plates. The theory of plate tectonics explains how the Earth's crust is moving in vast, rigid sections (plates) and is a modern revolution in our understanding of the planet. These plates include not only the Earth's solid upper crust, but also parts of the denser mantle below called *Asthenosphere*, and carry the continents and oceans on their

* The concept of *Continental Drift* was first described by the German geophysicist Alfred Wegener in 1910 and later reinvigorated as the *Theory of Plate Tectonics* in early 1960's.

Solution holes: Rainwater dissolves limestones and numerous solution holes are formed. Smaller holes are called the sink holes. Coalescence of neighbouring sink holes into larger hole is called the swallow hole. Further erosion leads to formation of extensive depression called dolines. Extensive dolines is called uvala. Most extensive depressions are called poljes. The disappearance of surface streams through a solution hole is called Blind Valley.

Mesa and Butte: A flat table land with resistant horizontal top and very steep sides. Erosion of Mesas over the years may result in isolated flat-top hills called Buttes.

Siefs: Long narrow ridges of sand lying parallel to the direction of the prevailing winds.

Playa: A temporary lake formed at the desert basin.

Zeugen: In areas which have parallel layers of both hard and soft rocks. After the lower soft portion gets eroded the resistant hard upper rock looks like a table, viz. zeugen.

Deserts

Desert is a part of Earth's surface that is too dry to support plant or animal life and is usually sparsely inhabited or uninhabited by man. Deserts are classified under three categories:

Sub-Tropical (Hot) e.g. Sahara, Arabian (Saudi Arabia, Kuwait, Qatar, UAE, Oman, Yemen), Kalahari (Botswana, S. Africa, Namibia), Australian (Gibson, Gt. Sandy, Gt. Victoria, Simpson and Sturt Stony), Mojave and Sonoran (US-Mexico), Chihuahuan (Mexico, SW US), and Thar (India-Pak) deserts. Here temperature rises as high as 58°C.

Mid-latitude (Temperate) e.g. Gobi (China-Mongolia), Great Basin and Colorado Plateau (US), Patagonian (Argentina), Atacama (Chile), Namib (Namibia), Kara-Kum and Kyzyl-Kum (Uzbek-Turkestan) deserts, Iranian, Taklamakan (China).

High-latitude (Polar/Cold) e.g. Antarctica and Arctic. Here temperature falls as low as -88°C and below in polar deserts. They receive less than 250 mm rainfall annually.

Grasslands

Grasslands are areas that are too dry to support green forests, but not dry enough to be a desert. Most commonly grasses grow here. Some grasslands: the Great Plains/Prairies (US, Canada); Steppes (Europe-Asia); Pampas (Argentina), Savannas (Cent. & S. Africa), Campos, Catingas, Llanos, Selvas, Gran Chaco (Brazil); Velds (S. Africa); Downs (Australia).

Islands

Islands take a large mass of land, the biggest 16 of them accounting for as much as 56 million sq. kms—greater than the area of the continent of Europe. The smaller islands count by the thousands. Islands are broadly divided into four types, continental, oceanic, tectonic and coral.

Continental Islands are those islands that rise from the continental shelf, like the British Isles or Newfoundland. These islands have the same geological structure as the continents to which they are related.

Oceanic Islands are those that rise from the bottom of the oceans. Their geological structure will have no relation to that of the nearest shores. They are very often the tops of submarine mountains or submarine volcanoes. Ascension and Tristan-da-Cunha, for example, rise from the Central Atlantic ridge (mountain) while St. Helena and Tenerife are islands formed by submarine volcanoes.

Tectonic Islands are created by movements in the Earth's crust. The outermost layer of the Earth made of rigid plates are in very slow, but constant, motion. When one plate is pushed under another plate, the top plate may scrape off pieces of the bottom plate. Over millions of years, this material piles up to form an island. Barbados in the

West Indies and Kodiak Island near Alaska were formed this way.

Coral Islands are the work of minute sea organisms called coral polyps. They congregate in large colonies. When the organisms die, their skeletons, which are made of a substance resembling limestone, form big clusters, some of which rise above the water.

One type of coral excels in building reefs. Reef-building corals thrive in warm tropical seas. They usually start building reefs, along the edges of islands. Such reefs are called fringing reefs. Many tropical islands have such fringes. These protect the islands from the ravages of the sea. Sometimes an island, with a coral fringe begins to sink. Its shoreline goes down first, while coral building continues upwards. The sea invades the sinking shoreline and separates the coral reef from the rest of the island. Such a reef is called a barrier reef. The Great Barrier Reef, which extends for more than 2000 km parallel with the coast of Queensland, Australia, appears to have come into existence in this manner. This is the biggest coral reef known and consists almost entirely of the limestone skeletons of countless coral colonies that had existed through thousands of years.

Atolls Low circular coral islands each with a central lagoon of shallow water, are called atolls. Atolls probably represent the last stage in the evolution of a coral island. When the island around which coral is built sinks, the coral ring remains above water, while the island disappears under the water. In course of time the coral limestone reef is weathered down to soil and seeds carried by birds or wind begin to sprout and produce vegetation. Then the coral reef turns into an inhabitable area—a coral island in fact.

Atolls consist of two parts, a central lagoon (watery area) and a surrounding reefland. Sometimes the watery surface is much bigger than the land surface. This is the case with Kwajalein in Marshall Islands, Central Pacific,

where the water area covers 2850 sq. km, while the land area is a narrow ring, with a total length of 280 kilometres. On the other hand, Christmas Island in Line Islands, Central Pacific, is an atoll with the largest land area known—480 sq. km. Its lagoon is relatively insignificant.

Hydrosphere

It is estimated that the hydrosphere contains about 1,460,000 cubic km of water. Of this 97.3% is in the oceans and inland seas. The rest 2.7% is found as glaciers and ice caps, fresh water lakes, rivers and underground water.

The total stock of ocean water and fresh water has been fairly constant throughout geological history. But the ratio between ocean water and fresh water has always changed according to climatic conditions. When the climate is very cold much of the sea water is absorbed by glaciers and ice caps and fresh water increases at the expense of sea water. When the climate grows hot, glaciers and ice caps melt and sea water gains at the cost of fresh water. Sea level observations during the last 60 to 80 years indicate that the sea level is rising slowly. This means that the climate is getting hotter.

The Oceans

The oceans cover 70.8% of the Earth's total surface area and hold 1445 million cubic km of water. This water despite its abundance is not directly useful to man, because it is not potable.

The ocean water contains about 3.5% of dissolved salts – chlorine, sodium, magnesium, sulphur, calcium, potassium, bromine, strontium and boron. Minute quantities of carbon, silicon, aluminium, fluorine and iodine are found. The oceanic waters are always in motion, owing to a variety of natural forces.

Solar heat sets ocean water moving. The Sun warms up the water in the equatorial

regions causing it to expand and rise by a few inches. This extra rise at the equator causes the water to flow down, to the north and south poles. As the warm water at the equator flows north and south, the heavier cold water (heavier, because of its extreme condensation) in the polar areas sinks below the warm water and spreads slowly along the bottom to the equatorial regions. This interflow is complicated by the force of the rotation of the Earth. Because the Earth spins eastwards, the seawater tends to roll up to the west, turning slightly to the right in the northern hemisphere, and to the left in the southern hemisphere. This is known as the *Coriolis Effect*, after the French mathematician who discovered it nearly a century ago.

The Oceans, unlike the continents, merge so naturally into one another that it is hard to demarcate them. Nevertheless, geographers have divided the oceanic area into 4 oceans, namely the Pacific, the Atlantic, the Indian and the Arctic. These oceans, by definition, include the seas, bays, gulfs and other ocean inlets attached to them.

The Pacific Ocean is the largest and the oldest of the oceans. It occupies 35.25% of the Earth's area. It is 16,880 km at its broadest and 11,516 m at its deepest (Mindanao Deep). It has the greatest conglomeration of islands, which fall into three broad groups. Micronesia, Melanesia and Polynesia. Area: 155.5m km², Av. Depth: 4028 m, Deepest place: Mariana Trench.

The Atlantic Ocean, the second largest ocean, covers 20.9% of the earth's area. Its greatest depth is 8,381 m (Milwaukee Deep). Area: 76.7m km², Av. Depth: 3926 m, Deepest place: Puerto Rico Trench.

The Indian Ocean, the third largest, stretches from Kanyakumari in India to the Antarctic at the South Pole. It takes up 14.65% of the Earth's total surface area. Its greatest depth is 7725 m. Area: 68.5m km², Av. Depth: 3963m, Deepest place: Sunda Trench.

The Arctic Ocean is the northern-most ocean. It winds round the North Pole and is completely frozen in winter and covered with drifting ice for the rest of the year. It is not navigable. Area: 14m km², Av. Depth: 1205m, Deepest place: 77°45'N; 175°W

The Antarctic Ocean* is otherwise called the Southern Ocean. It surrounds the whole of Antarctica. In winter it gets frozen and because of its great expanse it influences regional climate. Area: 20.3m km², Av. Depth: 4500m, Deepest place: South Sandwich Trench.

Salt in Ocean: NaCl 77.8%; MgCl₂ 10.9%; MgSO₄ 4.7%; CaSO₄ 3.6%; K₂SO₄ 2.5%; CaCO₃ 0.3%; MgBr₂ 0.2%

Rivers, Lakes and Falls

The two longest rivers in the world are the Amazon (Amazonas) flowing into the South Atlantic and the Nile (Bahr-el-Nil) flowing into the Mediterranean.

The length of the Amazon as measured in 1969 is 6448 km. A subsequent calculation has placed it at 6750 km. The length of the Nile as measured by M. Devroey of Belgium is 6670 km. If we take the lower figure for the Amazon (6447 km) the Nile leads by 223 km. If the greater length is considered (6750 km) the Amazon leads the Nile by 80 km.

However, in judging rivers, the primary criteria are the amount of water they carry and the extent of the area they serve, whether for navigation or cultivation. On these counts the Nile loses to the Amazon by wide margins. The Amazon river has the greatest flow of all rivers in the world with an average 119,000 cubic metres per second (118,860 cubic m of water per second (cusecs)) rising upto 200,000 cubic metres in flood. It has the largest river basin in the world, 7 million square kilometres. It has some 15,000 tributaries, the longest tributary, the Rio Madeira having a length of 3200 km.

* In 2000, International Hydrographic Organisation delimited Antarctic Ocean as the 5th world ocean.

River Valleys: The running river water is an agent of erosion forming U-shaped or V-shaped valleys. During the rivers' different stages, erosion forms different land form.

Meanders: It is the longitudinal s-shaped courses of rivers.

Ox-bow lake: Small lakes formed as a river cuts through a meander neck to shorten its course, block off the old channel and then migrates away from the lake.

Deltas: *Arcuate deltas* are arc-shaped, like in Narmada delta, Niger delta or Indus delta.

Bird-foot delta as in Mississippi delta.

Estuarine delta are those formed due to filling of estuaries of rivers as in Narmada & Tapi, Ob, Hudson, etc.

Atmosphere

The atmosphere is an insulating blanket protecting the Earth. It softens the intense light and heat of the Sun. Its Ozonic (O_3) layer absorbs most of the very deleterious ultraviolet rays from the Sun and thus protects living organisms from extinction.

The atmosphere is bound to the Earth by gravity. Satellites like the Moon, which have very low gravitational power, cannot and do not hold an atmosphere.

Air pressure simply means the weight of the entire air column over a given point. Air, of course, has very little weight. A litre of air weighs around 1.3 g. At the sea level, the air pressure is 1033.6 g per sq. cm. This pressure is usually described as one *atmosphere*.

Composition of Atmosphere: The atmosphere is composed of various gases and water vapour, and in its uppermost reaches, it is charged with subatomic particles. Up to about 50 km from the Earth, the atmosphere consists of about 78% nitrogen, 21% oxygen (O_2) and minor percentages of argon, carbon dioxide, neon, helium and methane, in that order. Above 50 km, the atmosphere is made up of atomic oxygen (O), ozone (O_3), helium and hydrogen.

Water vapour is present in the lower atmosphere, say up to 12 km, in concentrations ranging from 0.01% to 1%. Although the amount of water vapour in the atmosphere is very small, its importance is very great, for without water in the atmosphere, there would be no water on Earth. Water enters the atmosphere by evaporation from the hydrosphere (and by transpiration) and leaves the atmosphere by precipitation as snow or rain. It is a never ending 2-way traffic.

Clouds are made of water vapour that has evaporated from the Earth. They are very tiny droplets of microscopic size and are too light to fall down as rain. So they ride on the air waves until they condense and then fall down as rain.

Lightning: It is the surge of electricity from the Earth that makes lightning the awesome phenomenon that it is. The lead, however, is taken by the clouds which send down a rather weak stroke called the leader stroke. The Earth responds by sending up a much more massive stroke to the clouds. The whole thing takes less than a second, so that we see the leader stroke and the counter stroke as one flash of lightning. Dry air is highly resistant to electricity. When the air is loaded with water vapour it becomes a better conductor. Nevertheless, much power is required for the stroke to rip through the air. This excessive discharge of electricity heats up the air around the passage (of the stroke) to incandescent temperatures, say $10,000^\circ\text{C}$. It is this glowing air that we see as lightning flash. The heat also causes a sudden expansion of air which, as the heat disappears, contracts quickly again. This sudden expansion and contraction produce the familiar thunder clap. Although both occur at the same time, we see the flash first for light travels much faster than sound.

The character and composition of the atmosphere change as one goes higher and higher.

Spheres of Atmosphere 1. Troposphere with Tropopause, 2. Stratosphere with Stratopause, 3. Mesosphere with Mesopause and 4. Ionosphere and 5. Exosphere.

The one nearest the Earth—between 8 and 12 kms - is called the *Troposphere*. Here the temperature decreases with increase in height. It's the densest and contains water vapour and dust. Clouds are found here. Since 80% of the air mass is concentrated here it is capable of influencing Earth's climate. Tropopause is what separates Troposphere from Stratosphere.

Stratosphere, extends from 12 to 30 km, and the temperature remains steady. It is free from water vapour, clouds and dust. Jets often fly in this zone. Ozone protects Earth from the bad effects of the UV- rays radiating from the Sun. Stratopause divides Stratosphere from Mesosphere.

Mesosphere extends up to 80 km and is very cold. Still higher, starting about 80 km above the surface, is the *Ionosphere*. In this uppermost region many of the molecules and atoms of the Earth's atmosphere are ionized.

Ozone Layer

According to 2006 Reports of two UN agencies, the World Meteorological Organisation (WMO) and the UN Environment Program (UNEP), the earth's ozone layer is finally on the mend after decades of damage, i.e., recovering more slowly than experts had hoped. Over huge areas of Europe, North America and Asia in the northern hemisphere and over southern Australasia, Latin America and Africa, the layer would be back to pre-1980 levels by 2049. Over Antarctica, where so-called "ozone holes" have grown over the past 30 years, recovery was likely to be delayed until 2065. The good news is that the level of ozone-depleting substances continues to decline from its 1992-94 peak in the troposphere and the 1990s peak in the stratosphere. The earth's atmosphere is

enveloped by different layers but in the stratosphere it is covered by ozone gas. (Stratosphere extends from 12 km to 30 km above the Earth). Ozone has three oxygen atoms while oxygen has two. Ozone protects mankind from harmful radiation called ultraviolet (UV) rays from the Sun. The UV light from the Sun causes reaction leading to making and breaking of ozone oxygen. The ozone layer absorbs potentially harmful UV radiation from the Sun (at wavelengths between 240 and 320 nm). The main destroyers of the ozone are the CFCs (Chloro-fluorohydro-carbons) (from air conditioners, refrigerators, aerosols, solvents and in production of some types of packaging) and nitrogen oxides from fertilisers and aircraft emissions occurring high in the troposphere (which rise up into the stratosphere) where they are broken by UV light into chlorine (which has a very devastating effect on the ozone). One atom of chlorine can destroy over 100,000 molecules of ozone. Depletion of the ozone layer will allow UV light of the undesirable wavelengths to penetrate the atmosphere and reach Earth's surface. This causes skin cancer, severe sunburns, cataracts, damage vegetation, crop yields and sea life, among other things.

Winds

It is the air in motion. What causes the wind is the pressure gradient, it always from high pressure area to low pressure area. Due to the Earth's rotation the wind's direction changes suddenly due to deflection. In the northern hemisphere the wind is deflected to the right and in the southern hemisphere to the left. This phenomenon is called the Ferrel's Law. The force acting behind it is Coriolis force.

Types of Winds (i) Planetary winds are those that occur at the global scale, such as the trade winds, westerlies (Roaring Forties, Furious Fifties, Shrieking-sixties), doldrums, tropical cyclones- as in India, (Typhoon-Phil-

Monsoon in itself is considered a phenomenon. Monsoon is attached to such an atmospheric circulation which reverses its flow seasonally. If this criterion of seasonal reversal is applied strictly, then only a few regions of the world have monsoon wind system. It is in Asia that monsoonal circulation is found in the ideal form. USA, Northern Australia, West Africa also has monsoon-like experiences.

Indian Monsoon The monsoon in the truest sense is observed only around the Indian Ocean. The centres of action, air masses, and the dynamics of Indian monsoon are completely different from the rest of the world monsoon systems. The peninsular shape of the country has its role, as it divides the SW monsoon flanks to the north as the Arabian Sea branch and to the east as Bay of Bengal branch.

Rain: When the SW Monsoon brings about 1 metre of average rainfall over the plains of the country as a whole, it is called normal. But there are many places such as the windward side of the Western Ghats which receive between an average of 100-250 cm of rain. At Mahabaleshwar the rainfall amounts to 650 cm and Mawsynram, on the southern slopes of Khasi-Jayantia Hills, has the unique distinction of receiving average precipitation of 965 cm, in the world. The term 'drought' is generally applied when the country receives 85% or less of the long term average rainfall; the SW monsoon may be deemed to have failed when the rainfall is so scanty.

Peculiarities of Indian monsoon are: (a) tropical location of the Indian sub-continent, (b) Himalayas—the mountain barrier to the north of the landmass, cold and dry air-mass from the Central Asian high pressure zone. It not only blocks the SW wind from crossing over to the Tibetan plateau but allows it to spread in the north Indian belt. (c) monsoon is controlled by high and low pressure centres developed over northwest-

ern region of the Indian sub-continent, (d) It is in summer due to intense heating the high temperature (about 40 - 45°C) steepens pressure gradient over India, (e) extreme low pressure points (thermal low of upto 700 mb) that develop in the NW region, actively attract the prevailing wind from the Indian Ocean, (f) monsoon bursts over India with big turbulence, (g) Inter-tropical Convergence Zone shifts to the northern plains (about 30°N), (h) at its peak monsoon derives its strength from series of atmospheric depressions, that have their origin in the convergence zone of different air masses, (i) monsoon starts by 20th May and covers the whole country by July 15th, (j) retreating monsoon starts (also called NE monsoon) from northern regions by Sept. 1st, central India by Oct. 1st, and completely by first week of November, (k) Retreat of monsoon is also accompanied by disturbances such as cyclones, causing large scale damage to life and property along the eastern coast of India.

Lunar Statistics

- Distance from Earth^u-0.384403 m km
- Diameter-3,475 km
- Circumference- 10,927 km
- Temperature on Moon-134°C to -170°C • Revolution around Earth 27 days 7hrs 43min-11.47 sec
- Av. speed around Earth- 3700 kmph
- Age-About 4.6 b years
- Gravitational pull-1/6th that of Earth

^u The mean distance from the Earth: Apogee (max)-406,699 km, Perigee (min)-356,399 km The Moon revolves round the Earth in 27¹⁷ days (27 days 7 hours 43 minutes and 11.47 seconds) and rotates on its own axis in exactly the same time. That's why only one side is seen.

Earth Movements

The occurrence of earthquakes in India is due to the drifting of the so-called Indian Plate. Scientists divide the globe into a number of major tectonic plates that drift very slowly. Whenever and wherever these plates slide against each other a tremendous amount of energy is released and causes the terrific destructions. The recent earthquakes in Mahara-shtra and Gujarat give us a good estimate of how damaging they could be.

Earthquake

There was a time – some 225 million years ago – when the continents were not separated by oceans. The earth's surface knew only one massive continent, called Panagea. The some 200 million years ago, Panagea split into two major continents, one of them Gondwana-land (which contains Africa, South America, India and Australia). Gondwanaland continued to split into smaller land masses, one of them is the Indian plate. It drifted at a speed of 9 metres per century towards the Eurasian plate. Where these giant plates met under enormous pressure, the Himalayans were formed.

Types: Natural Earthquakes caused by endogenic forces. (i) Volcanic- caused due to volcanic eruptions, e.g., Mt Etna. (ii) Tectonic- caused due to stress and strain along Earth's plates or dislodging of rocks during faulting. (iii) Isostatic- caused by isostatic imbalance due to sudden geological activity at a regional scale. (iv) Plutonic- earthquakes originating deep inside the earth between 250 to 650 km deep.

How Earthquakes Occur? There are many fault-lines in the Earth's crust. A fault is where

blocks of crust on either side are moving relative to one another. The typical average rate is around a millimetre per year. If this movement happened gradually it would pose few problems for people living near by. Unfortunately rocks do not behave that way. Strain builds up for decades or centuries until it reaches a critical level, and then everything gives in at once.

Once a fault has given way at one point, slip movement may occur along its whole length, which may be hundreds or thousands of kilometres, though movement is usually restricted to a much shorter portion of the whole fault. The strongest seismic waves are generated at the initial break-point. The closer to the break-point, the greater the energy and the greater the potential for destruction, especially if the break-point is near the surface. Technically, the break-point is called the earthquake focus, and the point on the surface directly above it is referred to as the epicentre. Slip further along the fault and readjustments close to the focus usually cause a series of smaller aftershocks, which continue for days (even years in extreme cases) after the initial earthquake. Such kind of energy release are called waves because of the way they move. Most of the damage caused by an earthquake is not done by the P-waves and S-waves. These waves travel through the body of the Earth, and their energy is dissipated over a rapidly increasing distance as they propagate. It is the surface waves that travel along the surface that cause most of the harm. Down waves (like strong side-to-side

Major Earthquakes Worldwide

| Year | Date | Place | People killed** | Richter Scale |
|------|---------|--------------|-----------------|---------------|
| 1990 | Jun 21 | Iran | 35,000 | 7.7 |
| 1990 | July 16 | Philippines | 1,620 | 7.8 |
| 1991 | Feb 1 | Pak/Afghan | 1,200 | 6.8 |
| 1991 | Oct 20 | India | 1,600 | 6.1 |
| 1992 | Dec 12 | Indonesia | 2,200 | 6.8 |
| 1993 | Sep 30 | India | 10,000 | 6.4 |
| 1994 | Jun 6 | Colombia | 1,000 | — |
| 1995 | Jan 17 | Japan | 6,430 | 7.2 |
| 1995 | May 28 | Russia | 1,989 | 7.5 |
| 1997 | Feb 28 | Iran | 1,000 | 5.5 |
| 1997 | May 10 | Iran | 1,560 | 7.1 |
| 1998 | Feb 4 | Afghanistan | 4,500 | 6.1 |
| 1998 | May 30 | Afghanistan | 4,000 | 6.9 |
| 1998 | July 17 | Papua-Guinea | 2,100 | 7.1 |
| 1999 | Jan. 25 | Colombia | 1,170 | 6.3 |
| 1999 | Aug 17 | Turkey | 15,600 | 7.4 |
| 1999 | Sep. 21 | Taiwan | 2,000 | 7.6 |
| 2001 | Jan. 26 | India | 20,000+ | 6.9 - 7.9 |
| 2002 | Mar. 3 | Afghanistan | 166 | 7.4 |
| 2002 | Mar. 25 | Afghanistan | 1,000 | 6.1 |
| 2005 | Oct. 8 | Pak-India | 40,000 | 7.4 |
| 2006 | Jan 8 | S. Greece | | 7.9 |
| | May 27 | Indonesia | 6234 | 6.3 |
| | July | Indonesia | 659 | 7.7 |

**Approximate figures

S-body waves travel faster than the surface waves, and, if felt, can give a few seconds (minutes, if further away) warning of the arrival of the more damaging surface waves.

When Next? Scientists can't predict earthquakes but they know in which regions earthquakes are most likely to occur. Taking into account the speed and direction of the drift of the plates, the structure of the land masses and in particular the measurements of the tensions between different areas almost accurate probabilities can be calculated. Gujarat and the whole of Northern India are areas, with a high probability of experiencing severe earthquakes. Based on tension measurements and past movements of the Indian plate scientists know that a very major earthquake is going to hit the Shillong plateau in the north-

eastern part of the country before 2010. There is a very high probability – but it is absolutely impossible to predict an exact date or the epicentre of this quake.

Seismic Scale

The Richter scale is a logarithmic scale, devised in 1935 by geophysicist Charles Richter, for representing the energy released by earthquakes. More relevant as a measure of earthquake strength is the intensity, for which the modified Mercalli scale is used.

Comparative scale: Richter & Mercalli

| Richter | Mercalli | Effects |
|---------|----------|--------------------------------------------------------------------------------------------------|
| 2.5 | I & II | Generally not felt, but recorded |
| | III | Slight vibration |
| 4.5 | IV | Local damage. |
| 5.0 | V | Light damage. Can be felt indoors. |
| 6.0 | VII | Moderately destructive in populous region. |
| 7.0 | IX | Major earthquake. Inflicts serious damage. Roughly ten occur each year. |
| 8.0 | X | Great earthquakes. Occur once every 5–10 years; produce total destruction to nearby communities. |
| 9 | XI | Very disastrous, widespread |
| 10 | XII | Very very disastrous, panic |

Volcanoes

A volcano is a mountain or hill with an opening on top known as a crater. Hot melted rock (magma), gases, ash, and other material from inside the Earth mix together a few kilometres underground, rising up through cracks and weak spots in the mountain. Every once in a while, the mixture may blast out, or

erupt, through the crater. The magma is called lava when it reaches the air. Lava may be as hot as 1000 degree Centigrade. Gradually the lava cools and solidifies on the earth surface making new landforms. In some eruptions, huge fiery clouds rise over the mountain, and glowing rivers of lava flow down its sides. In other eruptions, red-hot ash and cinders shoot out from the mountain top, and large chunks of hot rock are blasted high into the air. A few eruptions are so violent they blow the mountain apart. Some eruptions occur on volcanic islands. Such islands are the tops of volcanic mountains that have been built up from the ocean floor by repeated eruptions. Other eruptions occur along narrow cracks in the ocean floor. In such eruptions, lava flows away from the cracks, building up the sea bottom.

Types: PERIODICITY: (i) Active- that which is alive now. e.g. Etna, Stromboli, Pinatubo, etc. (ii) Dormant- that which has not erupted for quite some time now. e.g. Vesuvius, Barren Is. (iii) Extinct- which has not erupted for several centuries/millennia or may not occur in near future too. **MODE of ERUPTION:** (i) Central / Explosive- e.g. Hawaiian type, Vesuvius type, Pelean type, etc. (ii) Fissure / Quite eruption: in which lava flow or flood, mud flow and fumaroles.

Volcanic eruptions

| Year | Volcano (place) | Deaths (approx) |
|-------|------------------------------|-----------------|
| 79 AD | Mt. Vesuvius, Italy | 16000 |
| 1586 | Kelut, Indonesia | 10,000 |
| 1792 | Mt. Unzen, Japan | 14,500 |
| 1815 | Tambora, Indonesia | 10,000 |
| 1883 | Krakatoa, Indonesia | 36,000 |
| 1902 | Mt. Pelee, Martinique | 28,000 |
| 1980 | Mt. St. Helens, USA | 57 |
| 1982 | El Chichon, Mexico | 1880 |
| 1985 | Nevado del Ruiz, Columbia | 23000 |
| 1986 | Lake Nyos, Cameroon | 1700 |
| 1991 | Mt. Mt Pinatubo, Philippines | 800 |

Ring of Fire: The hundreds of active volcanoes found on the land near the edges of the Pacific Ocean make up what is called the Ring of Fire. They mark the boundary between the plates under the Pacific Ocean and the plates under the continents around the ocean. The Ring of Fire runs all along the west coast of South and North America, from the southern tip of Chile to Alaska. The ring also runs down the east coast of Asia, starting in the far north in Kamchatka. It extends down past Australia.

Looking at the Continents

| Name | Area
sq
kilometres | % of
Earth's
area | Population
Estimate
(million) |
|--------------|--------------------------|-------------------------|-------------------------------------|
| Asia | 43 998 000 | 29.5 | 3879 |
| Africa | 29 800 000 | 20.0 | 877 |
| N. America | 21 510 000 | 16.3 | 501 |
| S. America** | 17 598 000 | 11.8 | 379 |
| Europe | 9 699 550 | 6.5 | 727 |
| Australia * | 7 699 000 | 5.2 | 32 |
| Antarctica | 13 600 000 | 9.6 | uninhabited |

* Australia with New Zealand, Tasmania, New Guinea and the Pacific Islands, (Micronesian, Melanesian and Polynesian Islands) is called Australasia by some geographers while some others call it Oceania. ** includes Caribbean countries

Oceans of the World

| | |
|----------|-------------------|
| Pacific | 166,241,000 sq km |
| Atlantic | 86,557,000 sq km |
| Indian | 73,427,000 sq km |
| Arctic | 9,485,000 sq km |

Continentwise Highest Point

| Continent | Peak | Height(m) |
|-----------|---------------|-----------|
| Asia | Mt. Everest | 8 848 |
| Africa | Kilimanjaro | 5963 |
| N. Am. | McKinley | 6 194 |
| S. Am. | Aconcagua | 6 959 |
| Europe | Mt. Elbrus | 5 633 |
| Oceania | Puncak Jaya | 4884 |
| Antactica | Vinson Massif | 4297 |

Continentwise Lowest Point

| Continent | Peak | Depth(m) |
|-----------|--------------|----------|
| Asia | Dead Sea | -396 |
| Africa | Lake Assai | -156 |
| N. Am. | Death valley | -115 |
| S. Am. | Vaides Patar | -169 |
| Europe | Caspian Sea | -28 |
| Oceania | Lake Eyre | -15 |

Oceans' Greatest Depths

| | |
|------------------------------------|--------|
| Mariana Trench, Pacific Ocean | 10920m |
| Puerto Rico Trench, Atlantic Ocean | 8605m |
| Java Trench, Indian Ocean | 7125m |
| Arctic Basin, Arctic Ocean | 5122m |

Major Seas

| | |
|---------------------------|-----------------|
| South China | 2,974,600 sq km |
| Caribbean | 2,515,900 sq km |
| Mediterranean | 2,510,000 sq km |
| Bering | 2,261,100 sq km |
| Gulf of Mexico | 1,507,600 sq km |
| Sea of Okhotsk | 1,392,100 sq km |
| Sea of Japan, or East Sea | 1,012,900 sq km |
| Hudson Bay | 730,100 sq km |
| East China | 664,600 sq km |
| Andaman | 564,900 sq km |
| Black | 507,900 sq km |
| Red | 453,000 sq km |

Major Lakes

| | |
|---------------------------|---------------|
| Caspian Sea, Asia-Europe | 371,000 sq km |
| Superior, North America | 82,100 sq km |
| Victoria, Africa | 69,500 sq km |
| Huron, North America | 59,600 sq km |
| Michigan, North America | 57,800 sq km |
| Tanganyika, Africa | 32,900 sq km |
| Baikal, Asia | 31,500 sq km |
| Great Bear, North America | 31,300 sq km |
| Aral Sea, Asia | 30,700 sq km |
| Malawi, Africa | 28,900 sq km |
| Great Slave, Canada | 28,568 sq km |
| Erie, North America | 25,667 sq km |
| Winnipeg, Canada | 24,387 sq km |
| Ontario, North America | 19,529 sq km |
| Balkhash, Kazakhstan | 18,300 sq km |

Deepest Lakes

| | |
|--------------------------|-------|
| Baikal, Russian Fed. | 1620m |
| Tanganyika, Africa | 1463m |
| Caspian Sea, Asia-Europe | 1025m |
| Malawi or Nyasa, Africa | 706m |
| Issyk-Kul, Kyrgyzstan | 702m |

Wettest Inhabited Places

| | |
|---------------------------|-----|
| Buenaventura, Colombia | 678 |
| Monrovia, Liberia | 513 |
| Pago Pago, American Samoa | 503 |
| Mouleim, Burma (Myanmar) | 487 |
| Lae, Papua New Guinea | 465 |
| Baguio, Philippines | 457 |
| Sylhet, Bangladesh | 452 |

Largest Deserts of the World

Subtropical

| | |
|---------------------------|------------------|
| Sahara, North Africa | 9,064,650 sq. km |
| Arabian, Middle East | 2,589,900 sq. km |
| Great Victoria, Australia | 647,475 sq. km |
| Kalahari, Southern Africa | 582,727 sq. km |
| Chihuahuan, Mexico | 453,232 sq. km |
| Thar, India/Pakistan | 453,232 sq. km |
| Great Sandy, Australia | 388,485 sq. km |
| Gibson, Australia | 310,788 sq. km |
| Sonoran, S.W. USA | 310,788 sq. km |
| Simpson/Stony, N. Africa | 145,034 sq. km |
| Mohave, S.W. USA | 139,854 sq. km |

Cool Coastal

| | |
|--------------------|----------------|
| Atacama, Chile SA | 139,854 sq. km |
| Namib, S.W. Africa | 33,668 sq. km |

Cold Winter

| | |
|-------------------------------------------------------|------------------|
| Gobi, China | 1,294,950 sq. km |
| Patagonian, Argentina | 673,374 sq. km |
| Great Basin, S.W. USA | 492,081 sq. km |
| Kara-Kum, West Asia | 349,636 sq. km |
| Colorado, Western USA, also called the Painted Desert | 336,687 sq. km |
| Kyzyl-Kum, West Asia | 297,838 sq. km |
| Taklamakan, China | 271,939 sq. km |
| Iranian, Iran | 258,990 sq. km |

Famous Waterfalls

| Name | Country | Drop (m) |
|----------------|-----------------|----------|
| Angel | Venezuela | 807 |
| Mongefossen | Norway | 774 |
| Kukenaam | Venezuela | 610 |
| Utigard | Norway | 600 |
| Ribbon | USA | 491 |
| King George VI | Guyana | 487 |
| Roraima | Guyana | 457 |
| Upper Yosemite | USA | 435 |
| Kalambo | Tanzania-Zambia | 426 |
| Gavarnie | France | 421 |
| Tugela | S. Africa | 410 |
| Takakkaw | Canada | 365 |

Deepest Caves

| Name | Location | Max. depth |
|---------------------------------|----------|------------|
| Resseau du Foillis | France | 1455 |
| Resseau de la Pierre St. France | France | 1321 |
| Snezhnaya, Caucasus | Russia | 1280 |
| Sistema Huatla | Mexico | 1220 |

Longest Rivers

| Name | Country/
Continent | Length in
kilometres |
|------------------------|-----------------------|-------------------------|
| Nile | Africa | 6650 |
| Amazon | S. America | 6437 |
| Mississippi-Missouri | USA | 6020 |
| Yangtze Kiang | China | 5494 |
| Ob-Irtysh | Russia | 5410 |
| Zaire | Africa | 4700 |
| Lena | Russia | 4400 |
| Hwang Ho | China | 4344 |
| Mackenzie | Canada | 4241 |
| Mekong | Asia | 4180 |
| Niger | Africa | 4180 |
| St. Lawrence | Canada-USA | 4023 |
| Parana | S. America | 4000 |
| Yenisey | Russia | 3804 |
| Murray-Darling | Australia | 3780 |
| Volga | Russia | 3690 |
| Zambezi | Africa | 3540 |
| Maderia | S. America | 3218 |
| Purus | S. America | 3200 |
| Yukon-Teslin | Alaska-Canada | 3185 |
| Rio Grande | USA-Mexico | 3040 |
| Indus | Asia | 2900 |
| Brahmaputra
(INDIA) | Asia | 2900 |
| Ganga | India | 2510 |
| Godawari | India | 1450 |
| Narmada | India | 1290 |
| Krishna | India | 1290 |

Deep-sea Trenches

| Name | Length | Depth | Deepest pt. |
|---------------------------------|--------|--------|----------------------|
| Mariana
(W. Pacific) | 2250 | 10 924 | Challenger
Deep |
| Tonga Kermadec
(S. Pacific) | 2575 | 10 850 | Vityaz 11
(Tonga) |
| Kuril-Kamchatka
(W. Pacific) | 2250 | 10 542 | |
| Philippine
(W. Pacific) | 1350 | 10 539 | Galathea
Deep |
| Java-Indian
(Ocean) | 2250 | 7725 | Planet Deep |

Units: Length in km and depth in metres

Principal Peaks

| Name | Country | Height (m) |
|-----------------------|-------------|------------|
| Mt. Everest* | Nepal-Tibet | 8 848 |
| Everest South Summit | — | 8750 |
| K2 (Mt. Godwin) | India (POK) | 8 611 |
| Kanchenjunga | Nepal-India | 8 598 |
| Dhaulagiri | Nepal | 8167 |
| Nanga Parbat (Diamir) | India | 8126 |
| Annapurna | Nepal | 8 091 |

| | | |
|----------------------|-----------------|-------|
| Nanda Devi | India | 7 817 |
| Mt. Kamet | India | 7 756 |
| Saltoro Kangri | India | 7742 |
| Gurla Mandhata | Tibet | 7 728 |
| Tirich Mir | Pakistan | 7 700 |
| Minya Konka | China | 7 690 |
| Saser Kangiri | India | 7672 |
| Muztagh Ata | China | 7 546 |
| Mt. Communism | Tajikistan | 7 495 |
| Badrinath Peak | India | 7138 |
| Chomo Lhari | India-Tibet | 7 100 |
| Aconcagua | Argentina | 6 960 |
| Ojos del Salado | Argentina-Chile | 6 885 |
| Mercedario Huascaran | Peru | 6 768 |
| Llullaillaco | Chile | 6 723 |
| Volcano Tupungato | Chile-Argentina | 6 550 |
| Sajama Volcano | Bolivia | 6 520 |
| Illimani | Bolivia | 6 462 |
| Vilcanota | Peru | 6 300 |
| Chimborazo | Ecuador | 6 267 |
| Mt. McKinley | Alaska | 6 194 |
| Cotopaxi | Ecuador | 5897 |
| Kilimanjaro | Tanzania | 5895 |
| Mt. Elbrus | Georgia | 5642 |
| Mt. Blanc | France-Italy | 4807 |
| Matterhorn | Switzerland | 4478 |
| Mt. Cook | New Zealand | 3764 |

* (Qomolangma-feng: Chinese, Sagarmatha: Nepalese, Mi-ti-gu-ti cha-pu long-na: Tibetan). The dormant volcano Mauna Kea (on Big Island of Hawaii) could be considered the tallest mountain in the world if one measures it from its base in the Hawaiian Trough (3280 fathoms deep) to its summit, it reaches a height of 10,203m. (4205m above the msl.)

Hottest, Coldest, Driest, Wettest

Hottest Place Dallol, Denakil Depression, Ethiopia, annual average temp. 34.4°C

• **Coldest Place** Plateau Station, Antarctica, annual average temp. -56.7°C

• **Wettest Place** Mawsynram, Meghalaya 1187 cm 74-yr. av.; (Mt. Waialeale, Hawaii Is., 1168 cm, 32-yr.av.) annual average rainfall

• **Driest Place** Africa, Atacama Desert, Chile, (no rain for 14 consecutive years) 0.08cm.

World's Largest Four Islands

| Name | Area sq km | Location |
|------------|------------|--------------|
| Australia* | 7 682 300 | Indian Ocean |
| Greenland | 2 175 600 | Arctic Ocean |
| New Guinea | 792 500 | Pacific |
| Borneo | 725 545 | Indian Ocean |

Kyoto Protocol

The amendment to the treaty on United Nations Framework Convention on Climate Change, called Kyoto Protocol, aims at cutting global emissions of Green House Gases (GHG). The Intergovernmental Panel on Climate Change (IPCC) has predicted an average global rise in temperature of 1.4°C to 5.8 °C between 1990 and 2100. Current estimates indicate that even if successfully and completely implemented, the Kyoto Protocol will reduce that increase by somewhere between 0.02 °C and 0.28 °C by the year 2050 (source: Nature, October 2003).

Objectives: Kyoto is intended to assign mandatory targets for the reduction of

global emissions of greenhouse gas to signatory nations. The objective is the "stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system" UNFCCC-2.

Status: The treaty was negotiated in Kyoto, Japan in December 1997, opened for signature on March 16, 1998, and closed on March 15, 1999. The agreement came into force on February 16, 2005 following ratification by Russia on November 18, 2004. As of July 2006, a total of 164 countries have ratified the agreement (representing over 61.6% of emissions from Annex I countries).

Global Warming

Global warming refers to an increase in average global temperatures, which in turn causes climate change. Climate change refers to changes in seasonal temperature, precipitation, wind, and humidity for a given area. Climate change can involve cooling or warming.

Temperature readings taken around the world in recent decades, and scientific studies of tree rings, corals, and ice cores, show that average global temperatures have risen since the industrial revolution began, with increases accelerating over the past few decades. The overwhelming consensus among climate scientists is that most of the increase is due to human economic activity, especially the burning of fossil fuels and deforestation. These activities contribute to a build-up in carbon

dioxide (CO₂) and other gases in Earth's atmosphere.

Our atmosphere is made up of gases, such as nitrogen, oxygen, and CO₂, and water vapor, which act like a "blanket" draped around the planet. Some of these gases—such as CO₂, water vapour, and methane—absorb heat, reducing the amount that escapes to space, and increasing global temperatures. This is what is called the "greenhouse effect," and these gases are often referred to as "greenhouse gases."

Without this process, the temperature of Earth's atmosphere would average about 30 degrees Celsius colder than it is today, making it difficult for Earth to sustain life as we know it. However, if this blanket were to become too "thick," with too many gases trapping too much heat, Earth would be uninhabitable.

notable exceptions include the United States and Australia. Other countries, like India and China, which have ratified the protocol, are not required to reduce carbon emissions under the present agreement.

According to terms of the protocol, conditions for entry into force required 55 parties and at least 55% reduction of the total CO₂ emissions at 1990 levels for the parties included in Annex I."

At its heart, Kyoto establishes the following principles: * Kyoto is underwritten by governments and is governed by global legislation enacted under the UN's aegis

* Governments are separated into two general categories: developed countries, referred to as Annex 1 countries (who have accepted strict GHG emission reduction obligations); and developing countries, referred to as Non-Annex 1 countries (who have no GHG emission reduction obligations) * Any Annex 1 entity failing to meet its Kyoto targets

is subject to a fine and further penalised by having its reduction targets increased by 30%

* By 2008, Annex 1 countries have to reduce their GHG emissions to around 5% below their 1990 levels. * Kyoto includes "linking mechanisms" which allow Annex 1 economies to meet their GHG targets by purchasing GHG emission reductions from elsewhere. The Kyoto linking mechanisms are in place for two main reasons: * the cost of complying with Kyoto is prohibitive for many Annex 1 countries (especially those countries, such as Japan or the Netherlands for example, with highly efficient, low GHG polluting industries, and high prevailing environmental standards). Kyoto therefore allows these countries to purchase Carbon Credits instead of reducing GHG emissions domestically; and, * this is seen as a means of encouraging Non-Annex 1 developing economies to reduce GHG emissions since doing so is now economically viable because of the sale of Carbon Credits.

Light Pollution

Lights, without question, help us feel secure but bad lighting hurts everyone. According to a popular 2001 study by University of Padua, Italy, two-thirds of the world's population is blind to the night sky. The loss of the dark star-filled sky is of tragic consequences for the environment and for the human soul, akin to the loss of our forested landscapes and other natural treasures. Bad light is affecting astronomical observations in different locations just as much as such conditions are affecting birds causing accidents (even killing itself) as it prey-on under street lights.

Since 1988, the International Dark Sky Association (IDA) — has dedicated itself to emphasise the gratuitous amount of energy and money wasted due to reckless

lighting practices. A simple glance at a supermall, city hoardings, billboards or corporate offices at night will demonstrate the light-spewing, the IDA is trying to clean up. Obviously, the preservation of life should remain at the forefront of civilisation's collective attention, but like any natural resource, the majesty of the night sky need not be compromised. The IDA does not seek to eliminate such useful and necessary forms of lighting. Instead, it is striving to modify the current excessive lighting practices. Following through such efforts can conserve energy, reduce harmful glare on the road, and of course, allow for a purer view of the night sky. The IDA, though, is trying to convince local and state governments to light intelligently and, coincidentally, economically. In US, states like Arizona, Texas, etc., have already enacted anti-light pollution laws.

Pollution

The word 'pollution', originally a Latin word 'pollutionem,' means to make dirty. Environmental pollution is a serious problem of the industrialised societies because people have converted the life—supporting systems of the entire living world into their own resources and have vastly disturbed the natural ecological balance. Serious degradation and depletion have been caused through over use, misuse and mismanagement of resources to meet the human greed.

Environmental pollution is defined as the unfavourable alteration of our surroundings, wholly as a by-product of man's activities through direct or indirect efforts of changes in the physical, chemical and biological characteristics of land, air or water that harmfully affect human life or any desirable living thing. Human population explosion, rapid industrialisation, deforestation, unplanned urbanisation, scientific and technological advancement, etc. are the major causes of environment pollution.

Air Pollution: Due to air pollution, the composition of the air is changing all over the world, esp. in industrialised countries. Air pollution results from gaseous emission from industry, thermal power stations, domestic combustion, etc. Most of the gaseous and particulate air pollutants are products of burning of fuels. Burning of coal mainly produces carbon dioxide, sulphur dioxide and fly-ash. Lead, carbon monoxide and nitrogen oxides are added to the atmosphere from automobile exhaust. Nitrogen oxides & sulphur dioxide together are responsible for acid rain. Carbon monoxide is highly toxic and impairs oxygen-carrying capacity of blood. Several cases of death are reported every year from carbon monoxide

poisoning from gas heaters, heating devices and coal mines. Lead which is emitted by automobile is known to hamper haemoglobin formation. Compounds containing chlorine and fluorine, especially the chlorofluorocarbons, are widely used as propellants and as refrigerants. They cause ozone depletion in stratosphere. Air-borne solid and liquid particulates are emitted by various industrial processes such as blasting, drilling, crushing, grinding and drying which may cause lung diseases, if inhaled.

Haemoglobin is known to absorb NO_2 more easily than oxygen. About 80 to 90% NO_2 inhaled is easily absorbed into the bloodstream. This reduces the oxygen-carrying capacity of blood. NO_2 causes lung tissue to become and cause lung cancer and emphysema (breathing problem due to the breakdown of the air sacs in the lungs, which then progressively diminishes the ability of the lungs to exchange oxygen and carbon dioxide in the blood stream). Thus, NO_2 causes bronchitis and bronchopneumonia. In presence of sunlight, NO_2 reacts with hydrocarbons to produce ozone, a highly toxic gas, known to cause asthma.

Water Pollution: Water pollution adversely changes the quality of water. It disturbs the balance of ecosystem and causes health hazards to humans and animals. Water becomes polluted by the presence or addition of inorganic, organic or biological substances.

Effluents from factories, paper mills, sugar mills, tanneries, urban and rural sewage are let into rivers. Water pollution also occurs due to the use of pesticides and fertilizers in agriculture. Enrichment of water by nutrient (esp. nitrate and phosphates) results in eutrophication of lakes and water bodies. This results in

excessive growth of algae and depletion of dissolved oxygen in the lake. Oil spills from oil tankers also causes marine pollution. Various harmful chemicals like DDT can enter into the food chain through polluted water.

Noise Pollution: Noise can be defined as unwanted sound. Whether a sound is pleasant or a noise depends upon loudness, duration, rhythm and the mood of the person. The most immediate and acute effect of noise pollution is impairment of hearing, anxiety and stress and in extreme cases fright. Physiological manifestations: increase in the rate of heart beat, constriction of blood vessels, digestive spasms and dilation of pupil of the eye. Loudness is measured in terms of decibels (dB). Just audible sound is about 10dB, a whisper is 20dB, and a normal conversation is 35-60dB. Sound beyond 80dB can be safely regarded as pollution as it harms hearing system. The WHO has fixed 45dB as the safe noise level for a city.

PM 10 and PM 2.5: PM stands for particulate matter and the numbers 10 and 2.5 are diameter of particles in micrometer (Mm). The particles less than 10 Mm diameter which are called respirable suspended particulate matter (RSPM) can enter into human nasal tract, and particles smaller than 2.5 Mm can reach further inside up to terminal bronchi and alveoli in the lungs - may cause serious lung diseases, tumour, cancer, etc.

Radioactive Pollution: Radioactive pollution is related to all major life supporting systems-air, water and soil. Radioactivity is a phenomenon of spontaneous emission of alpha, beta and gamma rays as a result of disintegration of atomic nuclei of some elements. Man-made sources of radiation pollution are mining and refining of radioactive material, production and explosion of nuclear weapons, nuclear power plants and fuels, and preparation of radioactive isotopes. All organisms are affected by radiation pollution. In high doses, radiation can cause death. Long or

repeated exposure can cause cancer and leukaemia and induce mutation.

Soil pollution and land degradation: The soil pollutants include pesticides, fertilizers, industrial wastes, mining wastes, salts, radioactive materials, tin, iron, lead, mercury, aluminium & plastics. Pesticides adversely affect the micro-organisms present in soil. In addition to this, pesticides enter in human food chain either through plants or through water which accumulates as surface runoff or leaches down in the ground water with pesticide dissolved in it. Poisonous waste render soil unfit for crop production. The dangerous metals like fluoride and arsenic when present in soil, not only contaminate the crops, but also ground-water.

Deforestation: Deforestation is a threat to the economy, quality of life and future of the environment. Main causes of deforestation in India are : explosion of human and livestock population, increased requirement of timber and fuel wood, expansion of agriculture land, enhanced grazing and construction of infrastructure along the mountains. Ideally 33% of land of a country must be covered by forest. Damage caused: intensified soil erosion, accentuated floods and drought and loss of precious wild life. India is losing about 1.5 million hectares of forest cover each year. Nearly 1% of the land surface of India is turning barren every year due to deforestation. In the Himalayan range, the rainfall has declined 3 to 4% due to deforestation.

Afforestation: It restores ecological balance of all ecosystems, maintain biological diversity, act as catchments for soil and water conservation, prevent floods and safeguard future of tribal people. So, we need to develop massive afforestation programme of indigenous and exotic fast growing species for production and protection of forestry on suitable land including wasteland. A massive social forestry programme is needed to meet demands of local people for fuel, fodder, timber, etc.

Environment

The biosphere is a sphere of living organisms or biological processes lying at the interface between the atmosphere, lithosphere and hydrosphere. The distinguishing feature of the biosphere is that it supports life. It is estimated that the biosphere contains more than 350,000 species of plants including algae, fungi, mosses and higher forms of plants, and 11 million animal species ranging from unicellular protozoa to man. The biosphere supplies the essential requisites of life for all these species, namely light, heat, water, food and living space or habitats.

The biosphere, or the eco-system, represents a stable equilibrium of various physical and biological factors which have been operating in the past. The organic continuity of the system rests on a network of interdependent relationships. The air, the water, man and the animals, plants and planktons, the soil and bacteria are all invisibly interlinked in a life-sustaining system we call the environment. All living organisms—microbes, plants, animals, man—have survived by adjusting themselves to the environment and attuning their lives to its rhythm.

50% forests lost, 40 species extinct

According to the final technical report of the National Biodiversity Strategy and Action Plan (NBSAP), India has lost over 50% of its forest cover, 40% of its mangroves, and a significant part of its wetlands in the past couple of centuries. The report "Securing India's Future: The Final Technical Report of the National Biodiversity Strategy and Action Plan" was released in 2005. At least 40 species of plants and animals has become extinct, including the cheetah and the pink-headed

duck, while several hundred more are under the threat of extinction. Much of the diversity crops and livestock had been lost or were under threat. All 18 of India's poultry breeds are also under threat.

The reason cited are habitat destruction, hunting and over-exploitation as the immediate causes of biodiversity loss, besides an unsustainable and insensitive model of development, breakdown of traditional management practices and institutions, centralisation of decision-making powers in the government, serious social and economic inequities, changes in moral and cultural values and lack of recognition of the full value of biodiversity in economic planning.

Sharing the Earth

We share the planet with trees, flowers, insects, fish, whales, dogs, and many other plants and animals. Each species of animals or plants has its place on Earth, and each one is dependant on others. Plants give off oxygen that animals need to breathe. Animals pollinate plants and spread their seeds. Animals eat plants and are in turn eaten by larger animals. When plants and animals die, they become part of the soil in which new plants take root and grow.

People and the Environment

Now the human population is 6.4 billion and is still rising very fast. By 2050, according to UN estimates, there will be 8.9 billion people on the planet. Remember in 1850, there were just a billion people here.

This many people and their activities on the planet are seriously affecting the plants

and animals of the world. Sometimes the damage can be controlled or even reversed but most of the time the damage is permanent. Today 1932 species of animals are endangered or threatened, according to WWF.

Habitats and some animals: Deserts: (hot/cold dry regions) – camels, kangaroos, mice, scorpions, rattle snakes • Tropical Forests: (warm, humid climate) – orangutans, gibbons, leopards, anteaters, parrots, deer • Grasslands: flat, open lands) – African elephants, kangaroos, Indian rhinoceros, giraffes, zebras, ostriches, tigers, deer • Mountains: highlands – yaks, snow leopards, eagles, mountain goats • Polar Regions: (cold regions) – polar bears, musk oxen, penguins • Oceans: sea – whales, dolphins, seals, octopuses, lobsters.

Some Endangered Animals

Giant Panda: Habitat- China. As few as 1000 Pandas remain in the mountains of southwest China • Leather-back Sea Turtle: Habitat. It is the largest living turtle living in the world. Habitat destruction, fishing nets, harvesting of its eggs are the biggest threats to their survival • California Condor: Habitat - N. America. There are just 60 of them alive in the wild. Of which half live in the State of Arizona, USA • Whooping Crane: Habitat – North America. In 2003, 15 whooping cranes migrated back north on their own for summer.

Biodiversity

Our planet is shared by 6.4 billion people and millions of species. The wide variety of life on Earth, as shown by the many species, is called biodiversity. Here is a sample of Earth's biodiversity. (The figures are estimates as new species are discovered all the time) Species: Mammal - 9000 (rodents 1700, bats 1000); Birds - 9000; Reptiles - 8000 (snakes 2900, lizards 4500); Amphibians - 5000 (frogs/toads 4500); Fish - 24,500 (sharks 350, bony fish 23000, rays & skates 450); Arthropods - 1.1 million (crustaceans 44000, insects 750000,

Global Deserts Outlook

World Environment Day celebrations for 2006 was held in Algiers with the theme "Don't Desert Drylands!". 2006 was also the UN International Year of Deserts and Desertification. The Global Deserts Outlook is the first thematic report in the Global Environment Outlook (GEO) series of environmental assessments by UNEP.

The world's deserts are facing great changes as a result of global climate change, high water demands, tourism and salt contamination of irrigated soils.

Desert margins and so called 'sky islands'-mountain areas within deserts that have been important for people, wildlife and water supplies for millennia-are under particular threat.

Some Key Facts

Almost one-quarter of the earth's land surface – some 33.7 million square kilometres – has been defined as "desert" in some sense. These deserts are inhabited by over 500 million people, significantly more than previously thought. Most of the 12 desert regions, whose future climate has been modeled, are facing a drier future with rainfall in some cases forecast to be 10 to 20% lower by the end of the century. The Dashti Kbir desert in Iran has seen a 16% fall per decade in rainfall during this same period; the Kalahari in South Africa a 12% decline and the Atacama desert in Chile, an 8% drop. The desert fringes in many places, however, suffer high pressures from human activities and include several of the most threatened terrestrial ecoregions of the world.

spiders 35000); Plants - 260000 (flowering plants 250000, evergreens 550).

Today, replacement of the communities of nature by man-made communities has become the new reality.

To safeguard life on Earth, people must learn to control and adjust the balances in nature that are altered by their activities.

Earth Day

April 22 is a day dedicated not just to recognise the beauty and riches of the Earth but also to make the Earth a healthier and safer place to live. Speeches, workshops, parades and demonstrations on the occasion of Earth Day have brought awareness about the dangers of overpopulation, energy waste, and other issues of vital concern. Earth Day was first observed on April 22, 1970 with the message "Give Earth a Chance" and intention to reclaiming the purity of the air, water and living environment.

World Environment Day

The UN General Assembly designated June 5 as World Environment Day, to deepen public awareness the need to preserve and enhance the environment. It was on that day the *UN Conference on the Human Environment* (Stockholm, 1972) started. The Assembly reconvened *United Nations Conference on Environment and Development* (UNCED) after 20 years, in Rio de Janeiro, where nations took up the challenges of a viable and equitable balance between environment and development and a sustainable future for the earth and its people.

International Agreements to Conserve Birds: *Ramsar Convention on Wetlands* (1971) Nearly 1,200 wetland sites in 133 countries, totaling 103 million hectares, have been designated for protection and monitoring under this international agreement to conserve wetland and use them sustainably • Program on *Man and the Biosphere and World Heritage*

Environmental Conferences

The Stockholm Conference 1972: United Nations Environmental Agency organised the International Conference on Human Environment, at Stockholm from 5 to 14 June 1972 - represented by 114 nations. The conference adopted the motto "Only One Earth" for the entire humanity. The Conference declared June 5 as the World Environment Day. **Nairobi Conference:** In 1982, UN Conference on Environment adopted a report "The World Environment 1972-82". It was a stock taking exercise.

Helsinki Conference 1989 decided to protect Ozone layer, phase out CFCs

London Conf. ('90) phase out CFCs
Copenhagen Conf. ('92) phase out CFC
-'96, CTC-'96, Halon-2000, HCFC-2030

The Rio summit 1992: The UN convened "Earth Summit" at Rio de Janeiro to foster "our common future" from 03 to 14th June; discussed 6 conspicuous issues: 1. GHG Emission 2. Forests, 3. Technology Transfer, etc. The Earth Summit Agenda 21 - a blue print for sustainable development.

Kyoto Summit, 1997, Japan, The conference was meant to set a framework for international action to mitigate global warming for at least next 10 years. **World Summit on Sustainable Development, 2002, Johannesburg, Aug. 26 to Sept. 4.** Over 4000 delegates from about 100 countries met to discuss issues including environment.

Stockholm Convention 2004: May 17, decided to phase out 12 dangerous pesticides and industrial pollutants.

Montreal Summit 2005: to speed up Kyoto Protocol initiative.

Convention (1972) Under UNESCO, these initiatives set a framework for designating, protecting and monitoring some of the world's most important biodiversity and cultural hotspots. • *Convention on International Trade in Endangered Species of Wild Fauna and Flora* (1975) An international agreement by 160 countries to monitor international trade in wild animals and plants and ensure that trade does not put wildlife in jeopardy. • *Convention on the Conservation of Migratory Species of Wild Animals* (1983) Eighty countries have signed this agreement, also known as the Bonn Convention, to protect migratory wildlife species, including birds, throughout their international migratory, breeding, and wintering areas. • *Convention on Biodiversity* (1992) A total of 185 countries have signed on to this agreement, which was introduced at the Earth Summit in Rio in 1992. Signatories promise to set up for protecting their biodiversity, including habitat protection and restoration.

Water Resources Day

World Water Resources Day is celebrated every year on 22 March with a specific theme. The theme of 2004 was 'Efficiency of Water Resources System' with sub-themes on critical review of current level of efficiency and measures for improving efficiency of water resources systems. The 2004 Water Resources Day -function organised by the Central Water Commission (CWC) highlighted the judicious utilisation of the available water resources in India and the need to conserve these resources to the optimum.

The average run-off in the river system of the country has been assessed as 1869 cubic kilometres. Of this, the utilisable portion by conventional storage and diversion is estimated as about 690 cubic kilometres. In addition, the replenishable ground water potential is estimated to be 432 cubic kilometres.

The per capita availability of water at national level has reduced from about 5177

cubic metres in 1951 to the estimated level of 1869 cubic metres in 2001. The availability of water resources on an annual basis is almost fixed whereas the demands from various sectors are gradually increasing.

Dinosaurs World

Dinosaurs roamed the Earth during the Mesozoic Era. Mesozoic Era is divided into 3 periods: Triassic Period (225-195 million years)

• Pangea- a united super continent • Morganucodon, the earliest known mammals appear (looked like a tiny rat) • Evergreen plants existed everywhere • Eoraptor (or dawn thief) appears; the earliest known dinosaurs was about 1.00 metres long and a meat eater • Herrerasaurus appears; was 3.00 metres long and meat eater • Plesiosaurs, a long-necked large marine reptile and Ichthyosaurs, looked like dolphin, ruled the seas. Jurassic Period (195 to 135 million years) • Flowering plants appear • Saururus (plant eaters) like Apatosaurus, the dinosaur lizard, (21 metres long, lived in W. US and Brachiosaurus - the biggest land creature ever lived. They were eaten up by T-Rex, Allosaurus and Megalosaurus • Triceratops appears - supposed to have three horns • Pterosaurs, flying reptiles and birds, ruled the sky • Stegosaurus, the dinosaur lizard, ate plants, about 1.30 metres long, lived in N. America. Cretaceous Period (135 to 65 million years) • T-Rex, the dinosaur Velociraptors, the species of dinosaur lived in Asia. It was 7 metres long. • Triceratops (3-horned face) was 3 metres long • Hadrosaurus the dinosaur 10 metres long and various species in S America • Tyrannosaurus Rex, the great lion of the Cretaceous lived in the US and Canada • Gigantopithecus, the largest primate leg • A. Javanicus, the largest hominid, lived in Java. • Neanderthal, the last of the Neanderthals, lived in Europe.

| Number | US & France | UK & Other European nations | India |
|-------------|----------------------|-----------------------------|---------------|
| 1 & 5 zeros | One Hundred Thousand | One Hundred Thousand | One Lakh |
| " 6 zeros | Million | Million | Ten Lakh |
| " 7 zeros | Ten Million | Ten Million | One Crore |
| " 8 zeros | Hundred Million | Hundred Million | Ten Crore |
| " 9 zeros | Billion | Milliard (Thousand Million) | Hundred Crore |
| " 12 zeros | Trillion | Billion | |
| " 15 zeros | Quadrillion | Thousand Billion | |
| " 18 zeros | Quintillion | Trillion | |
| " 21 zeros | Sextillion | Thousand Trillion | |
| " 24 zeros | Septillion | Quadrillion | |
| " 27 zeros | Octillion | Thousand Quadrillion | |
| " 30 zeros | Nonillion | Quintillion | |
| " 33 zeros | Decillion | Thousand Quintillion | |

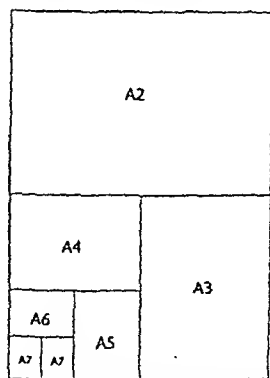
* The word 'billion' wherever it is used in this book means a 'thousand million' (American sense) unless otherwise

| | |
|-------------------------------|---------------------------------|
| Traditional paper size | Letter 216 x 279 mm |
| Foolscap 343 x 432 mm | Legal 216 x 356 mm |
| Crown 381 x 508 mm | Ledger 432 x 279 mm |
| Large Post 419 x 533 mm | Book size |
| Demy 445 x 572 mm | Crown quarto 189 x 246 mm |
| Medium 457 x 584 mm | Crown octavo 123 x 186 mm |
| Royal 508 x 635 mm | Large crown quarto 201 x 258 mm |
| Elephant 508 x 686 mm | Large crown octavo 129 x 198 mm |
| Imperial 559 x 762 mm | Demy quarto 219 x 276 mm |
| Office Paper size | Demy octavo 138 x 216 mm |
| Index card 127 x 203 mm | Royal quarto 237 x 312 mm |
| Executive 184 x 267 mm | Royal octavo 156 x 234 mm |
| Foolscap 203 x 330 mm | Paperback A format 111 x 178 mm |
| Folio/F4 210 x 330 mm | Paperback B format 129 x 198 mm |

International Paper Sizes

| | | | |
|-----------------|-------------|-----------------|------------|
| A series | | | |
| A0 | 841 x 1189 | B5 | 176 x 250 |
| A1 | 594 x 841 | B6 | 125 x 176 |
| A2 | 420 x 594 | B7 | 88 x 125 |
| A3 | 297 x 420 | B8 | 62 x 88 |
| A4 | 210 x 297 | B9 | 44 x 62 |
| A5 | 148 x 210 | B10 | 31 x 44 |
| A6 | 105 x 148 | | |
| A7 | 74 x 105 | C Series | |
| A8 | 52 x 74 | C0 | 917 x 1297 |
| A9 | 37 x 52 | C1 | 648 x 917 |
| A10 | 26 x 37 | C2 | 458 x 648 |
| | | C3 | 324 x 458 |
| | | C4 | 229 x 324 |
| | | C5 | 162 x 229 |
| | | C6 | 114 x 162 |
| | | C7 | 81 x 114 |
| | | DL | 110 x 220 |
| | | C7/6 | 81 x 162 |
| B Series | | | |
| B0 | 1000 x 1414 | | |
| B1 | 707 x 1000 | | |
| B2 | 500 x 707 | | |
| B3 | 353 x 500 | | |
| B4 | 250 x 353 | | |

(Measurement in Millimetre)



All sizes in these series have sides in the proportion of 1:2. A series is used for writing paper, books and magazines; B series for posters, C series for envelopes.

WORLD PANORAMA

**PART
06**

Nations of the World

The Biggest and The Smallest States

The Biggest

In Area

| State | Area (Sq km) | Location |
|------------|--------------|-------------|
| Russia | 17,075,000 | Europe-Asia |
| Canada | 9,976,139 | N. America |
| China | 9,561,000 | Asia |
| U.S.A. | 9,372,614 | N. America |
| Brazil | 8,511,965 | S. America |
| Australia | 7,682,300 | S. Pacific |
| India | 3,287,263 | Asia |
| Argentina | 2,776,654 | S. America |
| Kazakhstan | 2,717,300 | Asia |
| Sudan | 2,505,813 | Africa |

In Population

| State | Population | Location |
|------------|---------------|-------------|
| China | 1,313,973,713 | Asia |
| India | 1,095,351,995 | Asia |
| USA | 298,444,215 | N. America |
| Indonesia | 245,452,739 | Asia |
| Brazil | 188,078,227 | S. America |
| Pakistan | 165,803,560 | Asia |
| Bangladesh | 147,365,352 | Asia |
| Russia | 142,893,540 | Europe-Asia |
| Nigeria | 131,859,731 | Africa |
| Japan | 127,463,611 | Asia |

The Smallest

In Area

| State | Area (sq km) | Location |
|------------------|--------------|---------------|
| Vatican City | 0.44 | Europe |
| Monaco | 1.95 | Europe |
| Nauru | 21.10 | S. Pacific |
| Tuvalu | 26.00 | S. Pacific |
| San Marino | 61.00 | Europe |
| Liechtenstein | 160.00 | Europe |
| Marshall Islands | 181.00 | C. Pacific |
| St. Kitts-Nevis | 269.00 | E. Caribbean |
| Maldives | 298.00 | Indian Ocean |
| Malta | 316.00 | Mediterranean |

In Population

| State | Population | Location |
|---------------------|------------|------------------|
| Vatican City | 932 | Europe |
| Tuvalu | 11,810 | S. Pacific |
| Nauru | 13,287 | S. Pacific |
| Palau | 20,579 | W. Pacific |
| San Marino | 29,251 | Europe |
| Monaco | 32,543 | Europe |
| Liechtenstein | 33,987 | Europe |
| St. Kitts-Nevis | 39,129 | E. Caribbean |
| Marshall Islands | 60,422 | N. Pacific Ocean |
| Antigua and Barbuda | 69,108 | Caribbean |

World Population-2006

| Continents | Population | Continents | Population |
|---------------|---------------|-------------------|---------------|
| Asia | 3,913,842,171 | South America | 371,271,037 |
| Africa | 891,437,541 | Australia/Oceania | 32,744,469 |
| Europe | 729,341,014 | Antarctica | 0 |
| North America | 512,422,558 | Total | 6,451,058,790 |

Nations: a Ready Reckoner

| Country | Region | Capital | Currency |
|------------------------------|------------|---------------------|--------------------------|
| 1. Afghanistan | S.C. Asia | Kabul | Afgani |
| 2. Albania | S. Europe | Tirana | Lek |
| 3. Algeria | N. Africa | Algiers | Algerian Dinar |
| 4. Andorra | S. Europe | Andorra la Vella | Euro |
| 5. Angola | M. Africa | Luanda | readjusted Kwanza |
| 6. Antigua and Barbuda | Caribbean | St. John's | Eastern Caribbean Dollar |
| 7. Argentina | S. America | Buenos Aires | Peso |
| 8. Armenia | W. Asia | Yerevan | Dram |
| 9. Australia | Oceania | Canberra | Australian Dollar |
| 10. Austria | W. Europe | Vienna | Euro |
| 11. Azerbaijan | W. Asia | Baku | Manat |
| 12. Bahamas, The | Caribbean | Nassau | Bahamian dollar |
| 13. Bahrain | W. Asia | Manama | Bahraini Dinar |
| 14. Bangladesh | S.C. Asia | Dhaka | Taka |
| 15. Barbados | Caribbean | Bridgetown | Barbados dollar |
| 16. Belarus | E. Europe | Minsk | Rouble |
| 17. Belgium | W. Europe | Brussels | Euro |
| 18. Belize | C. America | Belmopan | Belize dollar |
| 19. Benin | W. Africa | Porto-Novo | Franc CFA |
| 20. Bhutan | S.C. Asia | Thimphu | Ngultrum |
| 21. Bolivia | S. America | Sucre | Boiviano |
| 22. Bosnia Herzegovina | S. Europe | Sarajevo | Konvertibilna marka |
| 23. Botswana | S. Africa | Gaborone | Pula |
| 24. Brazil | S. America | Brasilia (Federal) | Real |
| 25. Brunei | S.E. Asia | Bandar Seri Begawan | Brunei dollar |
| 26. Bulgaria | E. Europe | Sofia | Lev |
| 27. Burkina Faso | W. Africa | Ouagadougou | CFA Franc |
| 28. Burundi | E. Africa | Bujumbura | Franc Burundais |
| 29. Cambodia | S.E. Asia | Phnom Penh | Riel |
| 30. Cameroon | M. Africa | Yaounde | CFA Franc |
| 31. Canada | N. America | Ottawa | Canadian dollar |
| 32. Cape Verde | W. Africa | Praia | Escudo |
| 33. Central African Republic | M. Africa | Ndjamena | CFA Franc |
| 34. Chad | M. Africa | N'Djamena | CFA Franc |

| | | | | |
|-----|------------------------|------------|------------------------------------|--------------------------|
| 35. | Chile | S. America | Santiago (Adm)
Valparaiso (Leg) | Chilean peso |
| 36. | China | E. Asia | Beijing | Renminbi Yuan |
| 37. | Colombia | S. America | Bogota | Colombian Peso |
| 38. | Comoros, The | E. Africa | Moroni | Comorian Franc |
| 39. | Congo (formerly Zaire) | M. Africa | Kinshasa | Congo Franc |
| 40. | Congo | M. Africa | Brazzaville | Franc CFA |
| 41. | Costa Rica | C. America | San Jose | Costa Rican Colon |
| 42. | Cote D' Ivoire | W. Africa | Yamoussoukro | Franc CFA (XOF) |
| 43. | Croatia | S. Europe | Zagreb | Kuna |
| 44. | Cuba | Caribbean | Havana | Cuban peso |
| 45. | Cyprus | W. Asia | Nicosia | Cyprus Pound |
| 46. | Cyprus, Turkish | W. Asia | Nicosia | Cyprus Pound |
| 47. | Czech Republic | E. Europe | Prague | Koruna |
| 48. | Denmark | N. Europe | Copenhagen | Danish Krone |
| 49. | Djibouti | E. Africa | Djibouti | Djibouti Franc |
| 50. | Dominica | Caribbean | Roseau | East Caribbean Dollar |
| 51. | Dominican Republic | Caribbean | Santo Domingo | Peso |
| 52. | East Timor | S.E. Asia | Dili | US Dollar |
| 53. | Ecuador | S. America | Quito | US Dollar |
| 54. | Egypt | N. Africa | Cairo | Egyptian Pound |
| 55. | El Salvador | C. America | San Salvador | Colon |
| 56. | Equatorial Guinea | M. Africa | Malabo | Franc CFA (XAF) |
| 57. | Eritrea | E. Africa | Asmara | Nakfa |
| 58. | Estonia | N. Europe | Tallinn | Kroon |
| 59. | Ethiopia | E. Africa | Addis Ababa | Blrr |
| 60. | Fiji Islands | Oceania | Suva | Fiji Dollar |
| 61. | Finland | N. Europe | Helsinki | Euro |
| 62. | France | W. Europe | Paris | Euro |
| 63. | Gabon | M. Africa | Libreville | Franc CFA |
| 64. | Gambia, The | W. Africa | Banjul | Dalasi |
| 65. | Georgia | W. Asia | Tbilisi | Lari |
| 66. | Germany | W. Europe | Berlin | Euro |
| 67. | Ghana | W. Africa | Accra | Cedi |
| 68. | Greece | S. Europe | Athens | Euro |
| 69. | Grenada | Caribbean | St. George's | Eastern Caribbean Dollar |
| 70. | Guatemala | C. America | Guatemala City | Quetzal |
| 71. | Guinea | W. Africa | Conakry | Guinean Franc |
| 72. | Guinea-Bissau | W. Africa | Bissau | Franc CFA |
| 73. | Guyana | S. America | Georgetown | Guyana Dollar |
| 74. | Haiti | Caribbean | Port-au-Prince | Gourde |
| 75. | Honduras | C. America | Tegucigalpa | Lempira |
| 76. | Hungary | E. Europe | Budapest | Forint |

| | | | | |
|------|------------------|------------|----------------------------------------|-------------------|
| 77. | Iceland | N. Europe | Reykjavik | Krona |
| 78. | India | S.C. Asia | New Delhi | Rupee |
| 79. | Indonesia | S.E. Asia | Jakarta | Rupiah |
| 80. | Iran | S.C. Asia | Tehran | Rial |
| 81. | Iraq | W. Asia | Baghdad | Iraqi Dinar |
| 82. | Ireland | N. Europe | Dublin | Euro |
| 83. | Israel | W. Asia | Jerusalem | Shekel |
| 84. | Italy | S. Europe | Rome | Euro |
| 85. | Jamaica | Caribbean | Kingston | Jamaican Dollar |
| 86. | Japan | E. Asia | Tokyo | Yen |
| 87. | Jordan | W. Asia | Amman | Jordan Dinar |
| 88. | Kazakhstan | S.C. Asia | Astana | Tenge |
| 89. | Kenya | E. Africa | Nairobi | Shilling |
| 90. | Kiribati | Oceania | Bainiki (Tarawa) | Australian Dollar |
| 91. | Korea, North | E. Asia | Pyongyang | won |
| 92. | Korea, South | E. Asia | Seoul | Won |
| 93. | Kuwait | W. Asia | Kuwait | Kuwaiti Dinar |
| 94. | Kyrgyzstan | S.C. Asia | Bishkek | Som |
| 95. | Laos | S.E. Asia | Vientiane | Kip |
| 96. | Latvia | N. Europe | Riga | Lats |
| 97. | Lebanon | W. Asia | Beirut | Lebanese Pound |
| 98. | Lesotho | S. Africa | Maseru | Loti |
| 99. | Liberia | W. Africa | Monrovia | Liberian Dollar |
| 100. | Libya | N. Africa | Tripoli | Libyan Dinar |
| 101. | Liechtenstein | W. Europe | Vaduz | Swiss Currency |
| 102. | Lithuania | N. Europe | Vilnius | Litas |
| 103. | Luxembourg | W. Europe | Luxembourg | Euro |
| 104. | Macedonia | S. Europe | Skopje | Denar |
| 105. | Madagascar | E. Africa | Antananarivo | Malagasy Franc |
| 106. | Malawi | E. Africa | Lilongwe | Kwacha |
| 107. | Malaysia | S.E. Asia | Putrajaya (Adm)
Kuala Lumpur (Fin.) | Ringgit |
| 108. | Maldives | S.C. Asia | Male | Rufiyaa |
| 109. | Mali | W. Africa | Bamako | Franc CFA |
| 110. | Malta | S. Europe | Valletta | Maltese Lira |
| 111. | Marshall Islands | Oceania | Majuro Atoll | US Currency |
| 112. | Mauritania | W. Africa | Nouakchott | Ouguiya |
| 113. | Mauritius | E. Africa | Port Louis | Mauritius Rupee |
| 114. | Mexico | C. America | Mexico City | Mexico Peso |
| 115. | Micronesia | Oceania | Palikir | US Currency |
| 116. | Moldova | E. Europe | Chisinau | Leu |
| 117. | Monaco | W. Europe | Monaco | Euro |
| 118. | Mongolia | E. Asia | Ulan Bator | Tugrik |

| | | | | |
|------|----------------------------------------------------------|-------------|------------------|-----------------------|
| 119. | Montenegro | S.E. Europe | Podgorica | Euro |
| 120. | Morocco | N. Africa | Rabat | Dirham |
| 121. | Mozambique | E. Africa | Maputo | Metical |
| 122. | Myanmar | S.E. Asia | Yangon (Rangoon) | Kyat |
| 123. | Namibia | S. Africa | Windhoek | Namibia Dollar |
| 124. | Nauru | Oceania | Yaren | Australian Dollar |
| 125. | Nepal | S.C. Asia | Kathmandu | Nepalese Rupee |
| 126. | Netherlands, The | W. Europe | Amsterdam | Euro |
| 127. | New Zealand | Oceania | Wellington | New Zealand Dollar |
| 128. | Nicaragua | C. America | Managua | Cordobas |
| 129. | Niger | W. Africa | Niamey | Franc CFA |
| 130. | Nigeria | W. Africa | Abuja | Naira |
| 131. | Norway | N. Europe | Oslo | Norwegian Krone |
| 132. | Oman | W. Asia | Muscat | Rial Omani |
| 133. | Pakistan | S.C. Asia | Islamabad | Pakistan Rupee |
| 134. | Palau | Oceania | Koror | US currency |
| 135. | Palestine* | W. Asia | Ramallah | New Shekel |
| 136. | Panama | C. America | Panama City | Balboa |
| 137. | Papua New Guinea | Oceania | Port Moresby | Kina |
| 138. | Paraguay | S. America | Asuncion | Guarani |
| 139. | Peru | S. America | Lima | Nuevo Sol |
| 140. | Philippines, The | S.E. Asia | Manila | Peso |
| 141. | Poland | E. Europe | Warsaw | Zloty |
| 142. | Portugal | S. Europe | Lisbon | Euro |
| 143. | Qatar | W. Asia | Doha | Qatari |
| 144. | Romania | E. Europe | Bucharest | Leu |
| 145. | Russia | E. Europe | Moscow | Rouble |
| 146. | Rwanda | E. Africa | Kigali | Rwanda Franc |
| 147. | Samoa | Oceania | Apia | Tala |
| 148. | San Marino | S. Europe | San Marino | Euro |
| 149. | Sahrawi Arab Demo*
Rep. (S.A.D.R.),
Western Sahara | El-Aaiun | | N. Africa |
| 150. | Sao Tome & Principe | M. Africa | Sao Tome | Dobra |
| 151. | Saudi Arabia | W. Asia | Riyadh | Rial |
| 152. | Senegal | W. Africa | Dakar | Franc CFA |
| 153. | Serbia | S. Europe | Belgrade | Dinar |
| 154. | Seychelles | E. Africa | Victoria | Seychelles Rupee |
| 155. | Sierra Leone | W. Africa | Freetown | Leone |
| 156. | Singapore | S.E. Asia | Singapore City | Singapore Dollar |
| 157. | Slovakia | E. Europe | Bratislava | Slovak Koruna |
| 158. | Slovenia | S. Europe | Ljubljana | Tolar |
| 159. | Solomon Islands | Oceania | Honiara | Solomon Island Dollar |
| 160. | Somalia | E. Africa | Mogadishu | Somali Shilling |

| | | | |
|----------------------------------------|------------|------------------------------------------------------------|----------------------------|
| 161. South Africa | S. Africa | Pretoria (Adm.)
Cape Town (Leg.)
Bloemfontein (Jud.) | Rand |
| 162. Spain | S. Europe | Madrid | Euro |
| 163. Sri Lanka | S.C. Asia | Colombo | Sri Lankan Rupee |
| 164. St. Kitts and Nevis | Caribbean | Basseterre | Caribbean dollar |
| 165. St. Lucia | Caribbean | Castries | Caribbean Dollar |
| 166. St. Vincent and
the Grenadines | Caribbean | Kingstown | East Caribbean Dollar |
| 167. Sudan | N. Africa | Khartoum | Sudanese Pound |
| 168. Suriname | S. America | Paramaribo | Suriname Guilder |
| 169. Swaziland | S. Africa | Mbabane | Lilangeni |
| 170. Sweden | N. Europe | Stockholm | Krona |
| 171. Switzerland | W. Europe | Berne | Swiss Franc |
| 172. Syria | W. Asia | Damascus | Syrian Pound |
| 173. Taiwan | S. Asia | Taipei | New Taiwan Dollar |
| 174. Tajikistan | S.C. Asia | Dushanbe | Tajik Rouble |
| 175. Tanzania | E. Africa | Dodoma | Tanzanian Shilling |
| 176. Thailand | S.E. Asia | Bangkok | Baht |
| 177. Togo | W. Africa | Lome | Franc CFA |
| 178. Tonga | Oceania | Nuku'alofa | Paanga |
| 179. Trinidad and Tobago | Caribbean | Port-of-Spain | Trinidad and Tobago Dollar |
| 180. Tunisia | N. Africa | Tunis | Tunisian Dinar |
| 181. Turkey | W. Asia | Ankara | Turkish Lira |
| 182. Turkmenistan | S.C. Asia | Ashgabat | Manat |
| 183. Tuvalu | Oceania | Fongafale(Funafuti) | Australian Dollar |
| 184. Uganda | E. Africa | Kampala | Uganda Shilling |
| 185. Ukraine | E. Europe | Kyiv | Hryvna |
| 186. United Arab Emirates | W. Asia | Abu Dhabi | Dirham |
| 187. United Kingdom | N. Europe | London | Pound Sterling |
| 188. United States of America | N. America | Washington | D.C. Dollar |
| 189. Uruguay | S. America | Montevideo | Uruguayan Peso |
| 190. Uzbekistan | S.C. Asia | Tashkent | Soum |
| 191. Vanuatu | Oceania | Vila | Vatu |
| 192. Vatican City | S. Europe | Vatican City | Euro |
| 193. Venezuela | S. America | Caracas | Bolivar |
| 194. Vietnam | S.E. Asia | Hanoi | Dong |
| 195. Yemen | W. Asia | Sana'a | Riyal |
| 196. Zambia | E. Africa | Lusaka | Kwacha |
| 197. Zimbabwe | E. Africa | Harare | Zimbabwe Dollar |

S. Europe: Southern Europe; N. Europe: Northern Europe; E. Europe: Eastern Europe; W. Asia: Western Asia; E. Asia: Eastern Asia; S.E. Asia: South East Asia; S.C. Asia: South Central Asia; S. America: South America; N. America: North America; C. America: Central America; N. Africa: North Africa; E. Africa: East Africa; S. Africa: South Africa; M. Africa: Middle Africa.

NATIONS, alphabetically arranged

1. Afghanistan

Islamic State of Afghanistan



Capital: Kabul; Other Large Cities : Kandahar, Herat, Mazare-Sharif; Area: 647,497 sq.km; Population: 31,056,997; Languages: Pushtu and Persian; Religions: Sunny Muslim-80%, Shia Muslim-19%, others-1%; Literacy: 36%; Life Expectancy: 43.34; Currency: Afghani (\$1=43); p.c.i: \$ 800; Date of Independence: 19th August 1919.

Government Type: Islamic Republic; President: Hamid Karzai.

History: Afghanistan is a land-locked republic in Central Asia known originally as Ariana or Bactria, then as Khorasan (the land of the Rising Sun). Afghanistan has suffered from such chronic instability and conflict during its modern history that its economy and infrastructure are in ruins, and many of its people are refugees. Monarchy was overthrown in 1973, and a marxist 'people's republic' was created by Noor Taraki's coup of 1978. In 1986, Lt. Gen. Najibullah became President. Soviet troops, which had occupied

the country in 1979, faced resistance from Afghan tribesmen 'Mujahideen' (holy warriors). Soviet troops were withdrawn in 1989. In Feb. a military council headed by Najibullah was announced. Afghan rebels elected Sighba-tullah Mojaddidi as President of an interim government in exile. He handed over power to a Mujahideen leadership council.

The Mujahideen factions that captured Kabul in Apr. '92 began internecine fighting. Half the population of Kabul fled the city. In January 1994 President Burhanuddin Rabbani and PM Gulbuddin Hekmatyar parted ways. A few months later a newly formed Islamic movement 'Taliban' (i.e. 'students of religion') emerged as a new force. In 1995, they were in control of around a third of the country. In June 1996, Gulbuddin Hekmatyar again joined Rabbani and was sworn in PM but Rabbani was overthrown in Sept. by Taliban which imposed harsh Islamic laws and executed former President Najibullah. A Taliban offensive on 27 December, 1996 gave Taliban control of 90% of the country. In November, Taliban was overthrown by the Northern Alliance with US support. On April 18, 2002, former King of Afghanistan, Mohammed Zahir Shah, returned to Kabul after 29 years in exile in Italy. In June, Hamid Karzai, leader of the interim administration, was elected in a landslide vote to be the next President. NATO took command of the 5000-strong international peacekeeping force in Kabul in August.

Economy: Agriculture is the mainstay of the economy. The principal crop is wheat. Animal husbandry is important for meat, milk and wool. Chief mineral resource: natural gas. The main industrial activity is the

Note : p.c.i.: per capita income: GNI per capita (PPPS).
The boundaries of maps not true to scale.

manufacture of woollen and cotton textiles; traditional handicrafts and woven carpets are important exports. Afghanistan produces 3400 tonnes of opium worth (\$1.2b.) a year.

Recent Events: In January 2006, more than 30 people were killed in a series of suicide attacks in southern Kandahar province. International donors meeting in London pledged more than \$10 bn in reconstruction aid for five years. In May-June scores of people were killed in battles between Taliban fighters and Afghan and coalition forces in the south during an offensive known as Operation Mountain Thrust.

Mission in India: Embassy of Afghanistan, 5/50F, Shantipath, Chanakyapuri, New Delhi-110021. Tel: 26883602, 24103331, 24100412; Fax: 26875439.

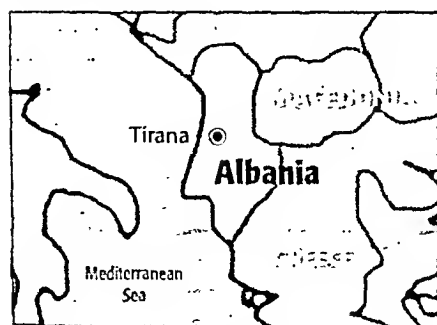
E-mail: afghanembassy@rediffmail.com

Indian Mission in Afghanistan (Temporarily closed): Embassy of India, Malalai Wat, Shahre-Nau, Kabul, Afghanistan.

Tel: 00-873-763095560; Fax : 00-873-763095561. E-mail: indembkabul@nic.in

2. Albania

Republic of Albania (Republika e Shqipërisë)



Capital: Tirana ; **Area:** 28,748 sq. km; **Population:** 3,581,655; **Languages:** Albanian, Greek; **Religions:** Islam-70%, Albanian Orthodox-20%; Roman Catholic-10%; **Literacy:** 86.5%; **Life Expectancy:** 77.43; **Currency:** Lek (\$1=97.50); **p.c.i.:** \$ 4,900; **Date of Independence:** 28th November, 1912.

First Atheist Country

Albania was the only officially atheist country in the world (1967-1990). Under Communist rule, all forms of religion, including private prayer in the home and owning religious icons, were forbidden. Today, religious freedom is entrenched in Albanian law, but the legacy of 50 years without religion is that many established denominations are as foreign to most Albanians as the average cult.

Government Type: Democracy; **President:** Alfred Moisiu; **PM:** Sali Berisha.

History: Albania lies on the west coast of the Balkan peninsula in south-east Europe. Albania was established as an independent state in 1912. Republic was formed in 1920. After world War II, Albania became a Stalinist state under Enver Hoxha, and remained staunchly isolationist until its transition to democracy after 1990. The 1992 elections ended 47 years of communist rule. It became Europe's first muslim state in Dec. 1992.

Albania descended into anarchy and chaos in early 1997 when widespread protests over failed high-risk investment funds (pyramid finance scheme) turned into a drive to oust the government of Dr. Sali Berisha, which was blamed for allowing fraudulent investment schemes and accused of profiting from them. Violence erupted and Albanians fled by the thousands to Greece and Italy. Security Council authorised a UN force for Albania. Elections were held in June-July. Berisha quit in disgrace.

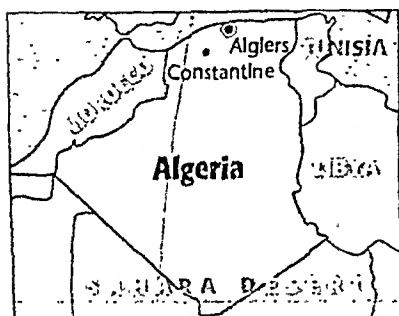
People are mostly Muslims. Public worship was outlawed in 1957. The right to practise religion was restored in 1990. Liberalisation measures included freedom to travel abroad. Albania left the Organisation of Islamic Conference (OIC) in Aug. '98.

Economy: More than half of GDP comes from agriculture, though despite extensive terracing only around one-quarter of the country is suitable for arable farming. Important minerals: coal, oil, chrome, copper and nickel. Industries: textiles, woollen fabrics, leather goods, petrol, cement, sugar, beer and cigarettes.

Mission In India: Embassy of Albania stationed at Cairo.

3. Algeria

People's Democratic Republic of Algeria (Al-3.



Jumhuriya Al-Jaazairiya ad-Dimuqratiya ash-Shabiya)

Capital: Algiers; Other Large Cities : Oran, Constantine, Annaba; Area: 2,381,741 sq.km; Population: 32,930,091; Languages: Arabic, Berber and French; Religions: Islam-99%, Christian and Jewish-1%; Literacy: 70%; Life Expectancy: 73.26; Currency: Dinar (DA) (\$1=73.285); p.c.i: \$ 7,200.; Date of Independence: 5th July, 1962.

Government Type: Republic; President: Abdelaziz Bouteflika.PM: Abdelaziz Belkhadem.

History: Algeria, formerly a French colony, is an independent republic in north west Africa and extends for 1000 km along the shores of the Mediterranean. Algeria became an independent republic in 1962.

Thousands have lost their lives in a civil war that started in 1992. Islamic fundamen-

talist party (Islamic Salvation Front) claims it was stripped of an electoral victory in the 1992 general elections. Elections were held in June '97 and the country's first multi-party legislature was sworn in. Massacres continued. Gradually peace returned to Algeria. A referendum was held in Sept. '99 on the peace plan to end the 7-year Islamic insurgency. About 100,000 people have been killed during the insurgency.

Economy: Agricultural products include wheat, barley, potatoes, artichokes, flax and tobacco. Fruits like dates, pomegranates and figs grow in abundance. Wine and olive oil are also produced. Chief occupation: cattle raising. Minerals: iron, zinc, mercury, copper, antimony, phosphates and petroleum. Industries: oil, light industry, food processing.

Mission In India: Embassy of the People's Democratic Republic of Algeria, E-6/5, Vasant Vihar, New Delhi-110057. Tel: 26146706, 26147036, 26147611; Fax: 26147033

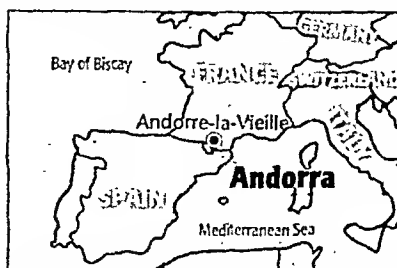
E-mail: embalgindia@hotmail.com

Indian Mission In Algeria: Embassy of India, 14, Rue des Abassides, Post Box No. 108 El-Bias- 16030 Algiers, Algeria. Tel: 00-213-21-923288; Fax: 00-213-2-924011.

Email: indemb@wissal.dz

4. Andorra

Principality of Andorra (Principat d'Andorra)



Capital: Andorre-la-Vieille; Area: 464 sq.km; Population: 71,201; Languages: Catalan,

French, Castilian; Religions: Predominantly Roman Catholic; Literacy: 100%; Life Expectancy: 83.5; Currency: Euro (\$1=0.79120); p.c.i: \$ 24,000; Date of Independence: 1278 (was formed under the joined suzerainty of the French count of Foix and the Spanish bishop of Urgel).

Government Type: Parliamentary Democracy; **Head of State:** President of France and the Bishop of Urgel (Spain) as co-princes. **Head of govt:** Albert Pintat Santolaria.

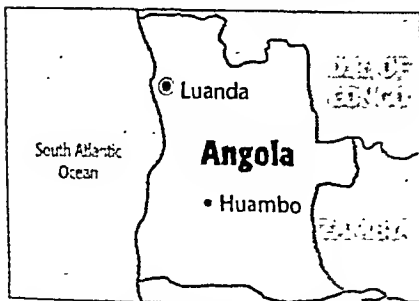
History: The co-principality of Andorra, founded in 1278, lies in the valleys of Eastern Pyrenees, between France and Spain.

Andorra, autonomous and semi-independent, got a constitution in 1993, adopted a parliamentary system and became the 184th member of the UN. It is nominally subject to the suzerainty of France and the Bishop of Urgel in Spain. The government is carried on by a council of 28 elected members.

Economy: Andorra is an agricultural country. Crops: cereals, potatoes and tobacco. Products: Iron, lead, alum, stone and timber. Tourism especially skiing is the main source of income.

5. Angola

Republic of Angola (Republica de Angola)



Capital: Luanda; **Other Large Cities:** Huambo, Lubango; **Area:** 1,246,699 sq.km; **Population:** 12,127,071; **Languages:** Portuguese, Bantu; **Religions:** Indigenous beliefs 47%, Roman Catholic-38%, Protestant-15%; **Literacy:**

Angolan Media

Angola's only daily newspaper, *Journal de Angola*, and the terrestrial TV service TPA are state-owned. Private radio stations operate in the main cities, including Catholic station *Radio Ecclesia*, but state-run radio is the only available broadcaster across much of the country.

66.8%; **Life Expectancy:** 36.79; **Currency:** Re-adjusted Kwanza (\$1=80.3749); p.c.i: \$ 3,200; **Date of Independence:** 11th November, 1975.

Government Type: Republic; **President:** Jose Eduardo dos Santos; **PM:** Fernando da Piedade Dias dos Santos.

History: Angola, (formerly Portuguese West Africa), which lies in South West Africa on the Atlantic coast, became an independent state in 1975.

A 16-year Civil War ended in 1991 but fighting between MPLA (People's Liberation Movement of Angola) and UNITA (National Union for the Total Independence of Angola) broke out again. Elections were held in 1992 but fighting continued into 1993 and 1994. A new peace treaty was signed in Nov. 94 but little was gained. In August, '95, rebel (UNITA) leader Jonas Savimbi accepted the invitation to become Vice President in a coalition government to be formed after nearly two decades of civil war that devastated the country.

Apr. 11, 1997, saw a ceremony marking the end of the Angolan civil war that killed half a million people, and the formation of a national unity government. In March, '98, Angolan govt. legalized UNITA. Another deadline was set for the final implementation of the Lusaka Protocol marking the end of civil war in Angola. August saw signs of the country sliding back into old tribal and regional animosities. The UN ended its mission

in Angola in March '99. Rebels captured most parts of the country. Jonas Savimbi, the UNITA leader, was killed in 2003.

Economy: Food crops: millet, maize, bananas and cassava. Cash crops: coffee, cotton, oil palm and sisal. Industries: textiles, brewing, cement, oil refining and sugar. Producing 700,000 barrels a day. Angola is the second largest oil-producer in sub-Saharan Africa (behind Nigeria). Angola produces about one-tenth of the world's gemstones. Exports: crude petroleum, coffee, diamonds, iron ore, fish, sisal and timber.

Recent Events: Outbreak of the killer Marburg virus claimed 180 lives in the Angolan town Viga.

Mission in India: Embassy of the Republic of Angola, 5/50 F, Nyaya Marg, Chanakya puri, New Delhi-110 021; Tel: 26110701, 26882680; Fax: 26110701, 24673787.

E-mail: xietuang@del2.vsnl.net.in.

Consulate: Mumbai; Tel: 22851430/1457/6070, Fax: 22875467.

E-mail: maria@bom3.vsnl.net.in

Indian Mission In Angola: 18A Rua Marques das Minus, Caixa Postal 6040, Maculusso, Luanda, Angola. Tel: (00 2442) 392281, 371089, Fax (00 2442) 371094.

E-mail: indembuanda@ebonet.net

6. Antigua & Barbuda



Capital: St. John's; **Area:** 442 sq km; **Population:** 69,108; **Languages:** English and Patois; **Religions:** Predominantly Protestant, some

Roman Catholic; **Literacy:** 85.8%; **Life Expectancy:** 72.16; **Currency:** East Caribbean Dollar US (\$1=2.70); **p.c.i:** \$ 11,000; **Date of Independence:** 1st Nov., 1981.

Government Type: Constitutional monarchy with UK-style Parliament; **Governor-General:** James Carlisle; **PM:** Winston Baldwin Spencer.

History: Antigua and Barbuda, part of the Islands of British West Indies, comprises three Islands: Antigua, Barbuda and (uninhabited) Redonda. Columbus landed on Antigua in 1493. Became independent on Nov. 1, 1981.

The population is of mixed European-Negro origin. About 3000 refugees fleeing a volcanic eruption on Montserrat have settled in Antigua since 1995.

Economy: The economy is agricultural. Main exports: Sugar and sea island cotton. Tourism is a major source of income. Manufactures: garments, fans, refrigerators and rum.

Mission in India: Embassy of Antigua & Barbuda stationed at New York.

7. Argentina

Argentine Republic (Republica Argentina)



Capital: Buenos Aires; **Other Large Cities:** Cordoba, Rosario, La Plata, Mendoza; **Area:** 2,766,654 sq. km; **Population:** 39,921,833; **Languages:** Spanish, Italian; **Religions:** Roman Catholic-92%, Protestant-2%, Jewish-2%, Others-4%; **Literacy:** 97.1%; **Life Expectancy:**

76.12; Currency: Peso (\$1=3.07850); p.c.i.: \$ 13,100.; Date of Independence: 9th July, 1816

Government Type: Republic; **Head of State & Govt (President):** Nestor Carlos Kirchner.

History: Argentina, the second largest state in S. America, lies at the tip of South America extending to some 3700 km from Bolivia to Cape Horn. Its maximum width is 1500 km. Argentina proclaimed its independence in 1816. A military junta deposed Isabel Peron's government in 1972. Return to civilian rule in 1983. In 1982, Argentina lost the Falkland Island war to Britain.

Economy: Argentina abounds in deposits of coal, lead, copper, zinc, gold, silver, sulphur and oil. Meat packing is the chief industry, with flour milling coming second. Others are chemicals, textiles, machinery, motor vehicles, paper and consumer durables. Agriculture and animal husbandry form important segments of the economy. Chief crops: grains, maize, grapes, linseed, sugar, tobacco, rice, citrus fruits, livestock products. Argentina is the world's largest source of tannin.

Argentina has been in the news in recent years because of severe economic problems, foreign debt and inflation.

In 2002, former dictator Gen. Leopoldo Galtieri was arrested and charged with the murder of suspected dissidents two decades ago.

Recent Events: In January 2006, Argentina repaid its multi-billion-dollar debt to the IMF. In May, citing environmental concerns, Argentina filed a complaint against the construction of two pulp mills in neighbouring Uruguay at the International Court of Justice in The Hague.

Mission in India: Embassy of the Argentine Republic, 2-2, Arda Vihar, New Delhi-110021. Tel: 51661982-84, 51661997, Fax: 51661992.

E-mail: ind@emamba online.com

Indian Mission in Argentina: Embassy of India, Arda Cordoba 950, 4th Floor, (1054)

Buenos Aires, Argentina. Tel: 00-54-11-43934001, 00-54-11-4934156; Fax: 00-54-11-43934063.

E-mail: indemb@indembarg.org.ar

Website: www.indembarg.org.ar

8. Armenia

Republic of Armenia (Haikakan Hanrapetoutioun)



Capital: Yerevan; **Other Large Cities:** Kirovakan, Kumairi; **Area:** 29,800 sq km; **Population:** 2,976,372; **Languages:** Armenian; **Religions:** Armenian Apostolic 94.7%, Other Christian 4%, Yezidi 1.3%, Others 9.8.6%; **Life Expectancy:** 71.84; **Currency:** the dram (\$1=422,500); p.c.i.: \$ 4,500; **Date of Independence:** 21st September, 1991.

Government Type: Republic; **President:** Robert Kocharyan; **PM:** Andranik Markarian.

History: A former Soviet republic, Armenia is bounded by Georgia, Azerbaijan, Turkey and Iran. Armenia is generally regarded as the first nation to formally adopt Christianity (early 4th century). Despite periods of autonomy, over the centuries Armenia came under the sway of various empires including the Roman Byzantine, Arab, Persian and Ottoman. During World War I in the western portion of Armenia, Ottoman Turkey instituted a policy of forced resettlement coupled with other harsh practices that resulted in an estimated 1 million Armenian deaths. The eastern area of Armenia was ceded by the Ottomans to Russia in 1828; this portion declared its independence in 1918, but was conquered by the Soviet Red Army.

n 1920. Armenian leaders remain preoccupied by the long conflict with Muslim Azerbaijan over Nagorno-Karabakh, a primarily Armenian populated region, assigned to Soviet Azerbaijan in the 1920s by Moscow. Armenia and Azerbaijan began fighting over the area in 1988.

Armenia has sought reunification with the Nagorno Karabakh autonomous region of neighbouring Azerbaijan. Soviet troops were sent to quell the ethnic civil war with Azerbaijan in Jan., 1990. Fighting between mostly Christian Armenia and mostly Muslim Azerbaijan escalated in '92 and continued in '93 and '94. A ceasefire was announced in May, '94. An earthquake in Dec., 1988 killed 55,000 and left 500,000 homeless.

Russia's staunch ally, Armenia signed a treaty in Apr. '97 allowing Russia to operate military bases in Armenia for 25 years.

Economy: It is a mountainous country with very fertile soil and extensive irrigation. Important crops: Grains, potatoes, olive, almonds, grapes, cotton, dairy products. Natu-

ral resources: Copper, zinc, aluminium, molybdenum, marble, granite, cement. Industry: Chemical, cement, textiles, food industries, carpet-weaving.

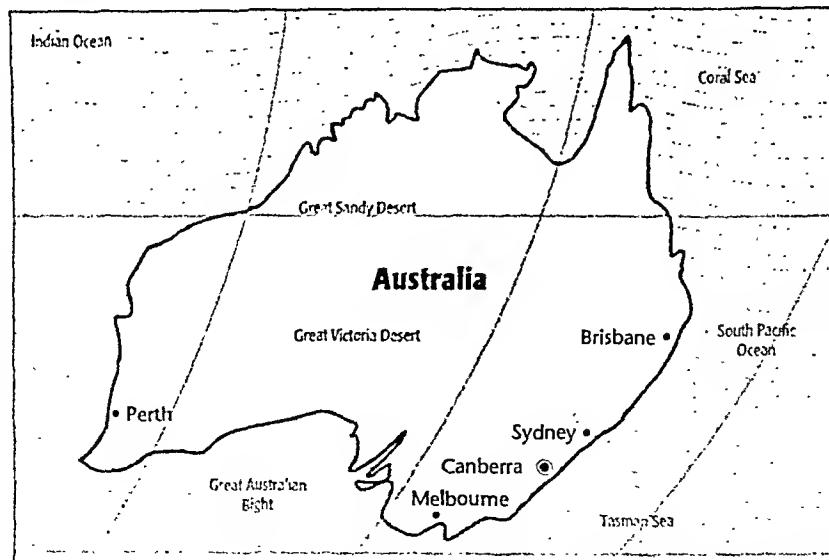
Mission In India: Embassy of the Republic of Armenia, E-1/20, Vasant Vihar, New Delhi-110 057. Tel: 26147328, 26153031; Fax: 26147329. E-mail: armemb@vsnl.com
E-mail: armemb@vsnl.com

Indian Mission In Armenia: Embassy of India, 50/2, Pioneerakan Street, Yerevan- 375019; Tel: 00-374-1-539173, 538288; Fax: 00-374-1-533984. E-mail: inemyr @arminco.com

9. Australia

Commonwealth of Australia

Capital: Canberra; **Other Large Cities:** Sydney, Melbourne, Brisbane, Perth, Adelaide; **Area:** 7,682,300 sq .km; **Population:** 20,264,082; **Languages:** English and aboriginal languages; **Religions:** Catholic-26.4%, Anglican-20.5%, Other Christian-20.5%, Buddhist-1.9%, Muslims-1.5%, other-1.2%, unspecified - 12.7 %



none-15.3%; Literacy: 99%; Life Expectancy: 80.5% ; Currency: Australian Dollar US (\$1=1.35); p.c.l: \$ 31,900; Date of Independence: 1st January, 1901.

Government Type: Democratic; Governor-General: Maj. Gen. Michael Jeffery; PM: John Winston Howard.

History: Before the arrival of European settlers, Aboriginal and Torres Strait Islander peoples inhabited most areas of the Australian continent. The first recorded European contact with Australia was in March 1606, when Dutch explorer Willem Janszoon charted the west coast of Cape York Peninsula, Queensland. Later that year, the Spanish explorer Luis Vaez de Torres sailed through the strait separating Australia and Papua New Guinea. Over the next two centuries, European explorers and traders continued to chart the coastline of Australia, then known as New Holland. In 1688, William Dampier became the first British explorer to land on the Australian coast. It was not until 1770 that another Englishman, captain James Cooke, aboard the Endeavour, extended a scientific voyage to the South Pacific in order to further chart the east coast of Australia and claim it for the British crown. Six colonies were created in the late 18th and 19th centuries; they federated and became commonwealth of Australia in 1901. The non-indigenous population at the time of Federation was 3.8 million. Half of these lived in cities, three-quarters were born in Australia, and the majority were of English, Scottish or Irish descent.

Australia is a Federation with power divided broadly between the national government and the state governments. The states are New South Wales, Victoria, Queensland, South Australia, Western Australia, Tasmania, Northern Territory and Australian Capital Territory.

About 352,970 people identified themselves as being of indigenous origin, at the 1996 census. About half the aborigines live in cities or towns. They participate at all levels of

life of the Australian community. Many aborigines still live in the remote areas of Australia and prefer traditional tribal oriented lifestyles. The boomerang was invented by the aborigines who have been there for more than 40,000 years.

In March 1986, Queen Elizabeth II signed the Proclamation of the Australia Act 1986, which severed Australia's last remaining constitutional links with Britain. Queen Elizabeth is formally Queen of Australia. In Feb., 98 Australians discussed at a constitutional convention whether to become a republic, with majority of delegates thinking that British queen as head of state is an outdated idea. However, opinion polls favoured monarchists.

Economy: Australia has now developed into a modern industrial nation built upon the solid foundation of an efficient and productive agricultural system and large reserves of minerals. Australia is an important producer and exporter of a wide range of agricultural products especially wool (Australia is the world's leading wool producer), wheat and meat and its mines provide minerals and metals of many types including coal, iron-ore, bauxite, gold, silver, lead, zinc, copper, nickel, oil and natural gas for use by local and overseas industries. The largest employer is the retail sector, but many others work in catering which also involves feeding more than four million tourists who arrive each year. The three best known icons of the country are Ayers Rock, the Great Barrier Reef and the Sydney Opera House, in addition to a bevy of world-class theme and heritage parks.

Australia has many unique plant and animal species including kangaroos, koalas, platypuses, dingos, Tasmanian devils, wombats and frilled lizards.

Australian external territories: Norfolk Island, Coral Sea Islands Territory, Territory of Ashmore and Cartier Islands, Cocos (Keeling) Island, Kiritimati (Christmas Island) and Australian Antarctic Territory, the Heard Island and Mc Donald Islands.

Recent Events: In January, 2006, Australia and East Timor signed a deal to divide billions of dollars in expected revenues from oil and gas deposits in the Timor Sea. Under the agreement, discussions on a disputed boundary were postponed.

Mission In India: High Commission for Australia, 1/50-G, Shantipath, Chanakyapuri, New Delhi-1107021. Tel: 51399900, 51221000 (Visa). E-mail: mark.webster@dfat.gov.au. Web: govindia.com

Indian Mission In Australia: High Commission of India, 3-5, Moonah Place, Yarralumla, Canberra ACT-2600, Australia. Tel: 00-61-2-62733999; 62733774, 00-61-2-62735479 (After office hours); Fax: 00-61-2-62731308, 6273328 (HC Office).

E-mail: consularcanb@bigpond.com (Consular); hcoffice@bigpond.com (HC).

10. Austria

Republic of Austria (Republik Österreich)



Capital: Vienna; **Other Large Cities:** Graz, Linz, Salzburg, Innsbruck; **Area:** 83,858 sq .km; **Population:** 8,192,880; **Languages:** German; **Religions:** Roman Catholic-74%, Protestant-5%, Islam-4%, others-17%; **Literacy:** 98%; **Life Expectancy:** 79.07 ; **Currency:** Euro(\$1= 0.79120); **p.c.i:** \$ 32,700; **Date of Independence:** 1156.

Government Type: Federal Republic; **President:** Heinz Fischer; **Head of Govt:** Chancellor Wolfgang Schuessel.

History: Famous for its spectacular moun-

tains scenery, Austria is no longer the dominant political force it was in Central Europe under the Hapsburg dynasty which ruled under the first world war. A republic since 1918, Austria, which was invaded by Nazi Germany in 1938, regained full sovereignty in 1955. Austria is a federal state of nine provinces. Austria joined the EU on Jan. 1, 1995. Over 65 per cent of the country is mountainous. The Danube is the main river. Forests cover about 40 per cent of the land, a greater proportion than in any other European country, apart from Sweden and Finland. The highest mountain is the Gross-glockner (12,465').

Economy: It depends mainly on mining, manufacturing, trade and services. Most Austrian are now employed in service industries, from banking to transport. Main agricultural products: livestock, forest products, grains, sugar beets, potatoes.

Austria is rich in mineral and energy resources, and both mining and energy production are nationalized industries. The country is the world's largest producer of magnesite, used in the chemical industry. Other materials mined include iron ore, lignite (brown coal), graphite, salt, quartz and clay. Austria is the world's fifth largest exporter of coniferous sawn timber. Services account for the largest share (60%) of GDP.

Mission In India: Embassy of Austria, EP-13, Chandragupta Marg, Chanakyapuri, New Delhi-110021. Tel: 26889050/049; Fax: 26886929/26886033

E-mail: new-delhi-ob@bmaa.gv.at

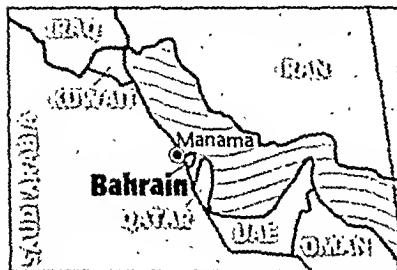
Indian Mission In Austria: Embassy of India and Permanent Mission of India to the UN Offices in Vienna, Kaerntnerring 2, A-1015 Vienna, Austria. Tel: 00-43-1-5850795; Fax: 00-43-1-5059219

E-mail: indemb@eoivien.vienna.at; Web: www.indiaembassy.at

grown. Industries: Tourism accounts for around 40% of GDP and employs a similar proportion of the workforce. Tourism (70% of GDP), banking and investment management.

13. Bahrain

State of Bahrain/Dawlat al-Bahrayn



Capital: Manama; Area: 669 sq. km.; Population: 698,585; Languages: Arabic, English, Farsi, Urdu; Religions: Muslim (Shi'a and Sunni) - 81.2%, Christian - 9%, other - 9.8%; Literacy: 89.1%; Life Expectancy: 74.45; Currency: Bahraini Dinar (\$ 1 = 0.377); p.c.i: \$23,000; Date of Independence: 15th August, 1971.

Government Type: Constitutional Hereditary Monarchy; Head of State: King Hamad bin Isa Al-Khalifa; PM: Shaikh Khalifa bin Sulman Al-Khalifa.

History: Bahrain, a British protectorate for 90 years, became an independent state on Aug. 15, 1971. It is an Arab state comprising 33 small islands in the Arabian Gulf. Bahrain is the biggest of the islands and has lent its name to the whole archipelago. It is an independent monarchy.

The traditional occupations of cattle breeding, agriculture and fishing are still practised but many modern industries have also come up. Oil accounted for the lion's share of the state revenues but by 1970s, oil reserves were depleted. International banking is a major activity today.

Economy: Agriculture: Fruits and vegetables, alfalfa, dates, poultry. Industry: Aluminium, ship building & repairs, electronics assembly, building materials, and banking. The people enjoy a very high standard of living. Education is free up to the secondary level and heavily subsidised with scholarships at higher levels. The population is 83% urban. Every fourth resident of Bahrain is an Indian.

Petroleum production and refining account for about 60% of export receipts, 60% of government revenues, and 30% of GDP. A large number of exports consist of petroleum products made from refining imported crude.

This archipelago manages some 85\$ billion in offshore banking assets. Financial institutions are attracted by a skilled work force, good communications and a regulatory system considered the most effective in the region. The country long ago branched into industries such as aluminium refining, ship repair and petro chemicals. It also does a tidy business as a tourist destination for Saudis.

Consulate: 5th Floor, Maker Tower, F Cuffi Parade Road, Colaba, Mumbai-4007005. Tel 2185856; Fax: 2188817

Indian Mission In Bahrain: Embassy of India, Building 182, Road 2608, Area 326, Ghudaibiya, P.O. Box No.26106, Adliya, Baharain. Tel:00-973-712683, 712832, 712785; Fax:00-973-715527.

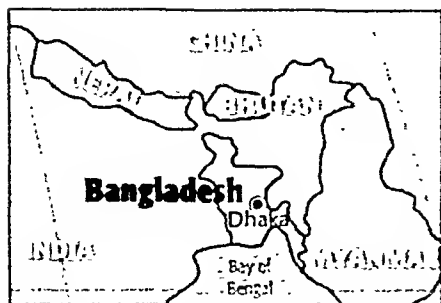
E-mail: indiacon@batelco.com.bh

Website: <http://www.indianembassy-bh.com>

14. Bangladesh

(People's Republic of Bangladesh; Gani Prajantani Bangladesh)

Capital: Dhaka; Other Large Cities Chittagong, Khulna; Area: 148,393 sq.km Population: 147,365,352; Languages: Bangla Chakma, Magh; Religions: Islam-83%, Hindu 16%, others-1%; Literacy: 43.1%; Life Expect



ancy: 62.46; Currency: Taka (US \$1=69.48); p.c.i.\$2,100; Date of Independence: 16th December, 1971.

Government Type: Parliamentary Democracy; **President:** Iaujuddin Ahmed; **PM:** Begum Khaleda Zia.

History: Bangladesh is surrounded by India, Myanmar and the Bay of Bengal.

A republic in south Asia, Bangladesh was formerly East Pakistan, one of the five provinces into which Pakistan was divided at its creation, when Britain's former Indian Empire was partitioned in August 1947. East Pakistan and the four western provinces were separated by about 1,600 km of Indian territory. East Pakistan was formed from the former Indian province of East Bengal and the Sylhet district of Assam. Although the East was more populous, government was based in West Pakistan. From the very inception of its formation, language remained the most problematic issue. Same status for Bengali language with Urdu and English was the demand and the movement involving all sections of the people of East Pakistan gave a strike call on 21 Feb, 1952. On that very day, police fired on a students' rally and several students died. Since then the day has been observed as the Language Day (Bhasa Divas).

East Pakistan became an independent entity named Bangladesh on 16 December, 1971, following civil war in which India actively supported the East. Leader of this independence movement, Sheikh Mujibur Rahman became the first Prime Minister.

In January 1975 parliamentary government was replaced by a presidential form of government. Sheikh Mujib became President, assuming absolute power. In February, Bangladesh became a one-party state.

On 15 August, 1975 Sheikh Mujib and his family were assassinated in a coup. Chief of Army Staff, Major-Gen. Ziaur Rahman (Gen. Zia) took over power on 7 November, 1975. In June 1978 the country's first direct presidential election resulted in a victory for Zia, who formed a Council of Advisers. Parliamentary elections followed in February 1979 in which President Ziaur Rahman's Bangladesh Nationalist Party (BNP) won 207 of the 300 directly elective seats in the Jatiya Sangsad.

Political instability recurred, however, when Gen. Ziaur was assassinated on 30 May 1981 during an attempted military coup. The elderly Vice-President, Justice Abdus Sattar, took over as acting President but was faced with strikes and demonstrations over the execution of several officers who had been involved in the coup.

On 24 March, 1982 there was a bloodless military coup, by which Lieut. Gen. Ershad became chief martial law administrator. President Sattar was deposed. The Constitution was suspended and parliament ceased to function. Assanuddin Chowdhury was sworn in as civilian president on 27 March. Lieut. Gen. Ershad assumed the presidency on 11 Dec., 1983.

Although the Government's economic policies achieved some success and gained a measure of popular support for Ershad, the all party alliance of MRD—Movement for the Restoration of Democracy—gained momentum.

In Jan. 1986 a National Executive Committee was formed and the National Party launched, composed of government supporters. Gen. Ershad was re-elected President on 15 October, 1986. The National Party won the general election of March 1988.

Gen. Ershad was deposed and arrested after a popular uprising in December 1990.

Shahabuddin Ahmed took over as Acting President. In the general elections held in February 1991 Bangladesh National Party led by Begum Khaleda Zia won 140 seats. Begum Zia was sworn in PM. In the general elections held in June, 1996, Awami League won 146 seats and Sheikh Hasina Wazed, daughter of the late Sheikh Mujibur Rahman, became the PM of Bangladesh. Jatiya Party quit the govt. in Mar. '98.

Tribal Shanti Bahini guerrillas fighting for autonomy in the Chittagong Hill Tracts surrendered in Feb. '98, ending a 25-year insurgency that claimed more than 8500 lives.

Bangladesh is the second largest Muslim country in the world. Dhaka, with 2000 mosques, is known as the city of mosques. The total for the country is over 200,000. There are an estimated 1,200,000 tribal people in Bangladesh. Most of them (700,000) are in Chittagong Hill Tracts (CHT).

Economy: Although half of Bangladesh's GDP is generated through the service sector, nearly two-thirds of the people are employed in the agriculture sector, with rice as the single-most-important product. Plots of land are very small-measured in tenths of a hectare. Half the population still cannot afford to feed themselves properly. At independence in 1971, the US Secretary of State dismissed the new country as an 'international basket-case'.

Recent Events: In February, 2006, opposition Awami League ended year-long parliamentary boycott.

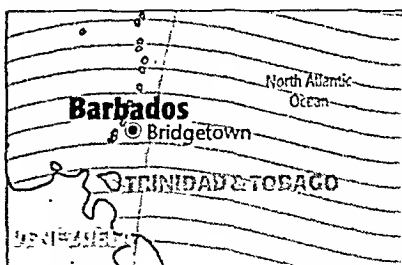
Mission In India: High Commission for the People's Republic of Bangladesh, EP-39, Dr.S.Radhakrishnan Marg, Chankyapuri, New Delhi - 110021. Tel: 26878948-49; Fax: 26878953.

E-mail: dhcdelhi@mantraonline.com

Indian Mission in Bangladesh: High Commission of India. House No. 2, Road No.142, Gulshan-1, Dhaka, Bangladesh. Tel: 00-8802-9889339. E-mail: hc@hcidhakha.org

15. Barbados

Capital: Bridgetown; **Area:** 430 sq km; **Popu-**



lation: 279,912; **Languages:** English; **Religions:** Protestant-67% (Anglican 40%, Pentecostal-8%, Methodist-7%, others-12%), Roman Catholic-4%, none-17%, others-12%; **Literacy:** 99.7%; **Life Expectancy:** 72.79; **Currency:** Barbados Dollar (BD) (\$1 = 2.00); **p.c.i.:** \$ 17,000; **Date of Independence:** 30th November, 1966.

Government Type: Parliamentary Democracy; **Head of State:** Queen Elizabeth II; **Governor-General:** Sir Clifford Husbands; **PM:** Owen Arthur.

History: The island of Barbados is the most easterly of the Caribbean islands, lying about 400 km north east of the mainland of South America. It is included in the Windward Isles. British settlers arrived in 1627. Slavery existed until 1834. Barbados became fully self-governing within the Commonwealth on Nov. 30, 1966. In 1997, a commission was appointed to consider abandoning all ties to Britain.

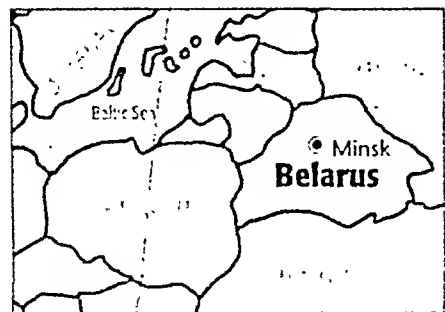
Economy: Agriculture and tourism dominate the economy of Barbados. Sugar, molasses, rum, electrical components and chemicals are major exports.

The island's economy has become diversified, thus reducing the importance of sugar. Services, especially tourism, are now the main source of employment. **Industry:** Light manufacturing, electronic component, sugar, food processing, beverages, rum, beer. Barbados'

Wildlife Reserve is home to two species of animals unique to the island—the green monkey and the large red-footed tortoise.

16. Belarus

(Republic of Belarus) Republika Belarus



Capital: Minsk; **Other Large Cities:** Gomel, Vitebsk; **Area:** 207,600 sq.km.; **Population:** 10,293,011; **Languages:** Belorussian, Russian; **Religions:** Eastern Orthodox-80%, others (Including Roman Catholic, Protestant, Jewish and Muslim)-20%; **Literacy:** 99.6%; **Life Expectancy:** 69.08; **Currency:** Rouble (\$1=2,144.0) p.c.i: \$ 6,900; **Date of Independence:** 25th August, 1991.

Government Type: Republic; **Head of State:** Aleksandr Lukashenko; **PM:** Sergei Sidorsky.

History: After seven decades as a constituent republic of the USSR, Belarus attained its independence in 1991. It has retained closer political and economic ties to Russia than any of the other former soviet republics. Russians form 13.2% of the population, Poles 4.1% and Ukrainians 2.9%.

In April, 1997, Belarus and Russia concluded a union treaty calling for the gradual creation of a confederation between the two Slavic nations.

Economy: Agriculture: Cattle-breeding for meat and dairy produce. **Important Products:** Potato, hemp, grain, flax, fodder. **Natural resources:** Valuable forest land wooded with oak, elm, maple; peat deposits. **Industry:**

motor vehicle, machine tools, agricultural machinery, peat, chemical fibre, paper, building materials, food processing, textile.

Mission in India: Embassy of the Republic of Belarus, 163, Jor Bagh, New Delhi-110 003. Tel: 24694518, 4697025; Fax:24697029.

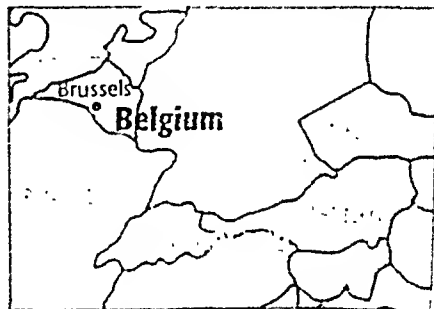
E-mail: india@belembassy.org

Indian Mission in Belarus: Embassy of India, Ulitsa Koltsova 4, Block No.5, Minsk 220090, Belarus. Tel: 00-375-17-2629399, 267739; Fax:00-375-17-2629799.

E-mail: amb@open.by/indembminsk@indiatimes.com (Ambassador's Office)

17. Belgium

Kingdom of Belgium, Koninkrijk Bekgie (Dutch), Royaume de Belgique (French)



Capital: Brussels **Other Large Cities :** Antwerp, Ghent **Area:** 30,521 sq.km; **Population:** 10,379,067. **Languages:** Flemish, French and German—all official; **Religions:** Roman Catholic-75%, Protestant and others-25%; **Literacy:** 99%; **Life Expectancy:** 78.77. **Currency:** Euro (\$1=0.7912); p.c.i: \$ 31,400 **Date of Independence:** 4th October, 1830

Government Type: Federal Parliamentary Democracy **Head of State:** King Albert II **Gov. Vermeir**

History: Belgium (in NW Europe) was named after the Belgae, people of Gaul who crossed the Rhine about 6th century B.C. has had a turbulent history and became an independent

During both the World Wars it was occupied by Germany but freed itself by the end of those wars. Belgium became a Federal State in February, 1993.

Economy: Although Belgium is essentially a manufacturing country, agriculture and forestry are also very important. Industry is concentrated mainly in the populous Flemish area in the north. The main crops are oats, rye, wheat, potatoes, barley and sugar beets. Coal is the country's only important mineral. Principal industries: steel and metal products, textiles, glass, fertiliser, sugar, heavy chemicals, etc. About 50% of the country's total production is exported. Roughly three-quarters of its trade is with other EU countries. Public debt is nearly 100% of GDP. Antwerp is the world's 4th largest port and also the world's biggest diamond-trading centre.

Language difference has been a source of unpleasantness. Transferring power from the central govt. to three regions—Wallonia, Flanders and Brussels—has been taken up by parliament.

The European Community has its headquarters in Brussels. There are international airports at Brussels and Antwerp.

Recent Events: Euthanasia and gay marriage have been legalized.

Mission in India: Royal Embassy of Belgium, 50-N, Shantipath, Chanakyapuri, New Delhi-110021. Tel: 26889851; Telefax: 26885821.

E-mail: ambabel@del2.vsnl.net.in

Consulate General of Belgium in Mumbai: Morena 11, M.L. Dahanukar Marg (Carmichael Road, Mumbai-400 026; Ph: +91 22 23515186, 23521602

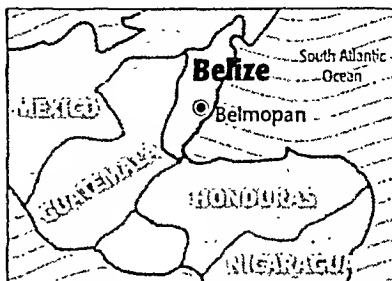
Indian Mission in Belgium: Embassy of India, 217-Chaussee de Vleurgat, 1050, Brussels, Belgium. Tel: 00-32-2-640992B, 6409140; Fax: 00-32-2-6489638.

E-mail: infogen@missionindia-belgium.org

Web: www.missionindia-belgium-org

18. Belize

Capital: Belmopan; **Other Large Cities:** Belize City, Orange Walk; **Area:** 22,965 sq. km



Population: 287,730; **Languages:** English, Spanish, Creole dialects; **Religions:** Roman Catholic-49.6%, Protestant-27%, None-9.4%, others-14%; **Literacy:** 94.1%; **Life Expectancy:** 68.3; **Currency:** Belize Dollar (\$1 = 1.977); **p.c.i.:** \$ 6,800; **Date of Independence:** 21st September, 1981.

Government Type: Parliamentary Democracy; **Governor-General:** Colville Young; **PM:** Said Musa.

History: Belize, formerly known as British Honduras, is a Central American republic with the Caribbean Sea to the east. Originally a British colony, it was granted autonomy in 1964 and became independent in 1981. The name Belize was adopted in 1973. The original capital Belize City was laid waste by a hurricane in 1961. The capital was shifted to Belmopan, an inland town, in 1970.

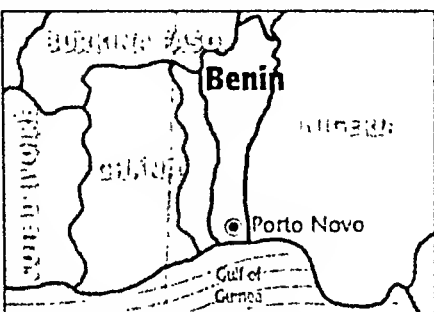
More than half the population is made up of the so-called Creoles or English-speaking Negroes, found mostly in the coastal regions. The indigenous (Red) Indian population consists of Mayans and Kekchis who live mostly in the reserves.

Economy: Forest products, especially timber, form a major export item. Sugar, citrus fruits, corn and bananas form the major products. Maize, rice, kidney beans and sweet potatoes are the main domestic staples. In-

dustries: Sugar, molasses, cigarettes, beer, garments, tourism. Wild life includes the curious creature manatee—an amphibian mammal—and several varieties of reptiles.

19. Benin

Republic of Benin, Republique du Benin



Capital: Porto Novo; Other Large Cities: Cotonou, Parakou; Area: 112,622 sq.km.; Population: 7,862,944; Languages: French and Tribal dialects like Fon, Yoruba; Religions: Indigenous beliefs-50%, Christian-30%, Muslim-20%; Literacy: 33.6%; Life Expectancy: 53.04; Currency: CFA Franc (\$1 = 518.98); p.c.i: \$ 1,100; Date of Independence: 1st Aug, 1960.

Government Type: Republic under multi-party democratic rule; Head of State & Govt (President): Yayi Boni.

History: The People's Republic of Benin (formerly Dahomey) is located north of the Gulf of Guinea in West Africa. It is one of the smallest and most densely populated states in Africa.

Formerly one of the provinces of French West Africa, Benin became an independent state on Aug. 1, 1960. The country has been plagued by coups and counter-coups. For some years Marxism-Leninism was the state ideology.

The first free presidential elections in 30 years were held in 1991. President Kérékou was re-elected in March, 2001.

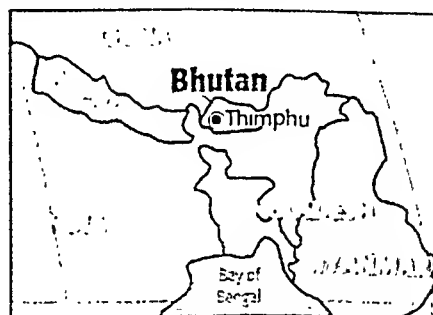
Economy: Products: palm oil, kernels, peanuts, cotton, coffee and tobacco. Food crops: Cassava, yams, maize, sorghum. Industry: Few factories. Palm oil-processing, brewing, sugar.

Mission In India: Embassy of Benin stationed at Beijing.

Honorary Consulate General, C-4, Sector-7, Noida, UP; Tel: 95120-24423373, 24423257; E-mail: sundert@ndf.vsnl.net.in

20. Bhutan

(Kingdom of Bhutan) Druk-Yul



Capital: Thimphu Area: 46,500 sq.km; Population: 2,279,723, Languages: Dzongkha, Chetsum (Nepali), English, Gurung, Assamese. Religions: Buddhist-75%, Hindu & Nepalese-25%, Literacy: 47%; Life Expectancy: 54.78. Currency: Ngultrum, fixed at par with the Indian Rupee which is also legal tender (\$1 = 45.84); p.c.i: \$1,400; Date of Independence: 8th August, 1949.

Government Type: Monarchy; Head of State: King Jigme Singye Wangchuk; Head of Govt: Jangnag Ngedup.

History: The Kingdom of Bhutan, the land of the 'Thunder Dragon' lies in the Himalayas, bordered north by China and all other sides by India. It has jagged mountains, fertile valleys and thick forests.

The first hereditary King of Bhutan, Zhabdrung Ngawang Namgyal, died on 17 Dec, 1651. A.R. Shah, former member of the Indian Parliament, visited Bhutan in 1999.

foreign relations under the supervision of the Government of British India. After India became independent, that treaty was replaced in Aug. 1949 by the Indo-Bhutan Treaty of Friendship, whereby Bhutan agrees to seek the advice of the Government of India with regard to its foreign relations, but remains free to decide whether or not to accept such advice.

King Jigme Dorji Wangchuk was succeeded in 1972 by the Western-educated 16-year-old Crown Prince, Jigme Singye Wangchuk. The new King stated his wish to maintain the Indo-Bhutan Treaty and to strengthen friendship with India.

Bhutan joined the UN in 1971 and the Non-Aligned Movement in 1973. In 1983 Bhutan became a founder-member of the South Asian Association for Regional Co-operation (SAARC).

Bhutan is a monarchy, without a written constitution. In 1907 the Tongsa Penlop (the governor of the province of Tongsa in central Bhutan), Sir Ugyen Wangchuk, was elected the first hereditary Maharaja of Bhutan. The Bhutanese title is Druk Gyalpo and his successor is now addressed as King of Bhutan. From Oct. 1969 the absolute monarchy was changed to a form of democratic monarchy. The National Assembly (Tshogdu) was re-instituted in 1953. All Bhutanese over 25 years may be candidates. Ten monastic representatives are elected by the central and regional ecclesiastical bodies, while the remaining members are nominated by the King, and include members of the Council of Ministers (the Cabinet) and the Royal Advisory Council. The Royal Advisory Council (Lodol Tsokde), established in 1965, comprises 10 members. Council of Ministers is known as Lhengye Shungtsog.

Recent reports indicate that the mountain kingdom is inching towards democracy. A political transformation is under way, its main force being the reformist monarch Jigme Wangchuk. A Royal edict placed before the

510-member National Assembly in June '98 said a two-thirds majority in the House could force the king to abdicate. The Assembly (its term: 5 years) will also throw up the Council of Ministers, one of whom will remain as chairman for a year. A draft constitution was released in Dec. 2002.

Economy: There are 20 districts. A Nepalese minority makes up 30-35% of the population. Bhutan, by world standards is one of the poorest countries. Its economy is largely a subsistence economy. People are engaged in subsistence farming; and barter is practised. The transition to market economy has changed social life. Life expectancy: 49 years. Urban population is 7%. Large deposits of limestone, marble, dolomite, graphite, lead, copper, slate, coal, talc, gypsum, beryl, mica, pyrites and tufa have been found.

Chief crops: Rice, millet, wheat, barley, maize, cardamom, potatoes, oranges, apples. Extensive and valuable forests abound. Livestock includes cattle, yaks, pigs, sheep and goats, and poultry. **Industry:** Food industry, cement, etc. Trade with India dominates.

Free education is available, but there are insufficient facilities to accommodate all school age children. Many students receive higher technical training in India.

All Bhutanese nationals are obliged to wear the national costume. Under law, Bhutanese women are treated as equal to men.

Though Bhutan for long resisted the lure of tourism, it is the principal source of foreign exchange now. The Kingdom was opened to tourism in the autumn of 1974.

Recent Events: In Dec. 2004, Bhutan became the first nation in the world to ban the sale of tobacco and smoking in public. King Wangchuk released a draft of a new constitution in March 2005 which outlines plans for the country to shift from an absolute monarchy to a two-party democracy.

Mission In India: Royal Bhutanese Embassy, Chandra Gupta Maro. Chanakyapuri. New

Delhi-1107021. Tel: 26889807, 26889809, 26889230; Fax: 26876710, 24674664.

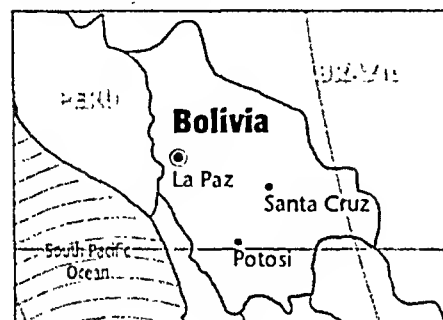
E-mail: bhutan@vsnl.com

Indian Mission in Bhutan: Embassy of India, India House Estate, Thimphu, Bhutan. Tel: 00-975-2-322162; Fax: 00-975-2-323195, 325341.

E-mail: rmisra@druknet.net.bt

21. Bolivia

(Republic of Bolivia) Republic de Bolivia



Capital: La Paz (administrative) and Sucre (judicial); **Other Large Cities:** Santa Cruz, Potosi; **Area:** 1,098,581 sq.km; **Population:** 8,989,046; **Languages:** Spanish, Quechua and Aymara; **Religions:** Roman Catholic-95%, Protestant; **Literacy:** 87.2%; **Life Expectancy:** 65.84; **Currency:** The Boliviano (\$1=7.99); **p.c.i:** \$ 2,900; **Date of Independence:** 6th August, 1825.

Government Type: Republic; **Head of State & PM(President):** Juan Evo Morales.

History: Bolivia, a South American state, lies astride the Andes.

Originally part of the ancient Inca Empire, Bolivia became independent in 1825. It has been named after Simon Bolivar, the famous South American fighter for freedom. Bolivia, like most Latin American states, has had a number of coups and counter-coups. It restored civilian rule in 1982 after years of military regimes.

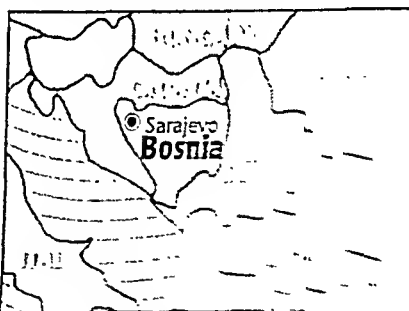
Lake Titicaca on the Peru-Bolivia border is the highest lake in the world.

Economy: Agriculture, the mainstay of the country, engages 70 per cent of the people. Chief crops: Potatoes, sugar, coffee, corn. Tin mining was the most important industry, until 1985 when international tin market collapsed. Zinc, lead, antimony and tungsten are the other important minerals. Mining accounts for about 70% of foreign exchange earnings. Other industries: Textiles, food processing, refined petroleum. A privatisation programme affecting some 60 state-owned enterprises was launched in 1992. On August 5, 2002 Gonzalo Sanchez de Lozada, a millionaire businessman, was again elected to lead the nation for the next five years.

Mission in India: Embassy of Bolivia stationed at New York.

22. Bosnia-Herzegovina

(Republic of Bosnia and Herzegovina; Republika Bosna i Hercegovina)



Capital: Sarajevo

Population: 4,383,771

Currency: Bosnian Dinar

Religion: 97% Roman Catholic, 3% Orthodox

Government: Semi-presidential

President: Milorad Dodik

Prime Minister: Vjekoslav Bevanda

Language: Bosnian, Croatian, Serbian

Area: 51,129 sq.km

Independence: 1992

Member of: UN, NATO, EU, OSCE, etc.

Member (Croat): Ivo Miro Jovic; Presidency Head of Govt: Adnan Terzic.

Republic of former Yugoslavia, Bosnia-Herzegovina is traditionally known as the powder keg of the Balkans, with its explosive ethnic mix of three groups (Muslim Slav-43%; Serbs-31%; Croats-17%; others-9%.) and its three religions (Muslims-40%, Catholics-15% and Orthodox-31%).

History: The country was settled by Slavs in the 7th century. Bosnia was conquered by Turks in 1463. At the Congress of Berlin (1878), the territory was assigned to Austro-Hungarian administration under nominal Turkish suzerainty. Austria-Hungary's outright annexation in 1908 generated international tensions which contributed to the outbreak of World War I.

Croats and Muslims voted for independence in Oct. 1991. A referendum for independence was passed in Feb. 1992. A 'Serb republic' was formed in the predominantly Serb-populated Bosnian territories. Serbs' opposition to the referendum spurred violent clashes. In April, Independence of the republic was recognised by U.S. and E.U. Fierce fighting continued. Serbs massacred thousands of Bosnian civilians. By mid-'94 three-fourths of Bosnia came under Serb control.

Peace talks were held but Serb-Muslim-Croat fighting continued. In '93, negotiations resumed to partition Bosnia. In July an ineffective ceasefire was in force. A peace plan authored by USA, UK, France, Germany and Russia was under consideration. NATO launched a series of massive air raids on Serbian positions and Sarajevo and in Serb-held Bosnian territory in August, '95 after the shelling of Sarajevo market by Serb gunmen.

In Sept., '95, Bosnia's warring sides decided to put an end to the three and a half-year-old war by cutting the nation into two parts: one for the rebel Serbs and the other for Muslims and the Croats. In Oct., a ceasefire was to come into effect but Serbs were reportedly engaged in a new 'ethnic cleansing' operation.

February 96 saw the end of the war as the fragile truce imposed by the Dayton accords was reaffirmed at a summit in Rome. March, Sarajevo, divided by war for almost five years, was reunited as the last of five Serb enclaves passed to the Muslim-Croat federation. In July, UN war crimes tribunal issued arrest warrants for Bosnian Serbs' political leader Radovan Karadzic, who later agreed to stand down. In Sept., elections were held for a person collective presidency and for seats in federal parliament.

In Mar. 98, US and its NATO allies decided to keep the international peace-keeping force in Bosnia (31,000 troops) through end of 1998. The Dayton peace agreement failed in knitting the three communities into a single state.

Economy: Agricultural products: Wheat, maize, potatoes, plums, timber, cattle, sheep. Industry: Textiles, timber, rugs, cement, electricity, coal, steel. The war has destroyed 95% of industrial capacity.

Recent Events: In January 2006, Christian Schwarz-Schilling took over from Padraig Ashdown as UN High Representative. In February, International Court of Justice in The Hague began hearings in genocide case brought by Bosnia-Herzegovina against Serbia and Montenegro. In July, largest war crime trial to date over the 1995 Srebrenica massacre opened at the UN tribunal in the Hague.

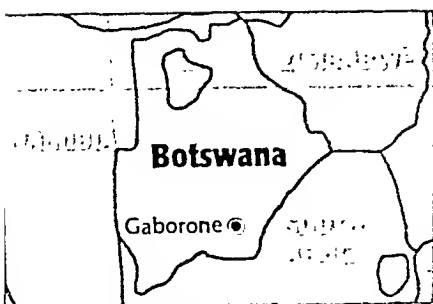
Mission In India: Embassy of Bosnia-Herzegovina, C-7/9, Vasant Vihar, New Delhi 110 057. Tel: 26147415, 26147416; Fax: 26143042.

E-mail: bos_her@starith.net

23. Botswana

(Republic of Botswana)

Capital: Gaborone; **Other Large Cities:** Francistown, Lobatse; **Area:** 581,730 sq. km; **Population:** 1,639,833; **Languages:** English, Setswana and Sishona; **Religions:** Christian



71.6%, Badimo-6%, other-1.4%, unspecified-0.4%, none-20.6%; Literacy: 79.8%; Life Expectancy: 33.74; Currency: Pula (\$1=5.86); p.c.i: \$ 10,500 ; Date of Independence: 30th September, 1966.

Government Type: Parliamentary Republic; **Head of State & Govt (President):** Festus Mogae.

History: The Republic of Botswana – the land of the Batawana tribes – (formerly known as Bechuanaland) is located in Southern Africa. Most of the country is near-desert, with the Kalahari occupying the western part of the country. Botswana became independent in Sept. 1966 and assumed its present name.

Rural population is 80% and population growth rate 3.5%. The country is divided into 10 districts.

Economy: Cattle industry is the most important economic activity. Important crops: Sorghum, corn, millet, beans. Beef is the main export. Diamonds, manganese, asbestos, coal, copper and nickel are leading mineral resources. The economy is closely tied to that of South Africa. Botswana's per capita income grew 9.2% between 1965 and 1995. But in 2001, the country had the highest rate of HIV infection in the world.

Mission in India: Embassy of Botswana stationed at Tokyo.

Indian Mission in Botswana: High Commission of India, Plot 5375, President's Drive, Private Bag 249, Gaborone, Botswana. Tel: 00-267-372676; Fax: 00-267-374536

E-mail: hicomind@info.bw

24. Brazil

(Federative Republic of Brazil) - República Federativa do Brasil



Capital: Brasília; **Other Large Cities :** Sao Paulo, Rio de Janeiro, Belo Horizonte, Recife, Salvador; **Area:** 8,511,965 sq.km; **Population:** 188,078,227; **Languages:** Portuguese (official), Spanish, English, French; **Religions:** Roman Catholic (nominal)-73.6%, Protestant-15.4%, Spiritualist-1.3%, Bantoo/Voodoo-0.3%, other-1.8%, unspecified-0.2%, none-7.4%; **Literacy:** 86.4%; **Life Expectancy:** 71.97; **Currency:** Real (\$ 1= 2.25); **p.c.i:** \$ 8,400; **Date of Independence:** 7th September, 1822.

Government Type: Federative Republic; **President:** Luiz Inacio Lula da Silva.

History: Brazil, the largest South American state, lies more or less in the centre of South America. It borders every nation on the continent except Chile and Ecuador. It is a land of dense forests and mighty rivers. The Amazon and the Sao Francisco cover the north of the country.

Brazil was a Portuguese settlement and declared a kingdom in 1515. The Portuguese exploited wealth early in the 16th century from pau-brasil, from which it took its name. Monarchy and a republic had control in 1964 but restored in 1985.

Until the 1970s Brazil was an almost entirely Catholic country. But a 1998 unofficial survey found that one in six Brazilians now profess loyalty to mainly protestant evangelical churches.

About 75% of Brazil's population now live in the cities. Brasilia, a showpiece of modern architecture and town planning, was declared the capital on April 21, 1960.

Economy: In many respects, Brazil is an advanced industrial economy. Around one-quarter of the labour force works in industry. Brazil's industry has benefited from its wealth of mineral resources. The major exports of Brazil are soybeans, sugar, coffee, iron ore, cocoa beans, maize, sisal and tobacco. (world's largest exporter of flue-cured tobacco). Agriculture accounts for 9% of GDP. The contribution of industry and services to GDP is 32% and 59% respectively.

Brazil is one of the world's top eight producers of agricultural commodities. The number one coffee producer for more than a century, Brazil also leads in oranges, orange juice concentrate, alcohol, sisal, cassava and bananas. It has the planet's largest commercial cattle herd, and comes only to the United States in soya production and to India in sugar cane output.

Brazil possesses vast deposits of mineral wealth—chrome ore, iron, phosphates, uranium, manganese, copper, coal, platinum and gold. Oil is a state monopoly. The wax which is used for phonograph records and insulation is a monopoly product of the state. Brazil is the only source of high grade quartz crystal in commercial quantities.

In August, 1992, Brazil's foreign debt of \$ 123 billion was the developing world's highest, its inflation rate was close to 250%, the highest in Latin America. Currency devaluation and crisis added to instability in 1999. Lula da Silva was inaugurated 36th President of Brazil on Jan.1, 2003-Brazil's first working-class President.

Recent Events: In May, 2006, scores of people were killed in gang attacks and a police backlash in Sao Paulo state. The violence was sparked by a series of prison uprisings.

Mission in India: Embassy of Brazil, B, Aurangzeb Road, New Delhi-110011. Tel: 23017301; Fax:23793684;

E-mail: brasindi@vsnl.com

Consulate: Mumbai:Tel:22002236/2256/7511/1796, Fax:22009456

E-mail: brazilcons@rediffmail.com

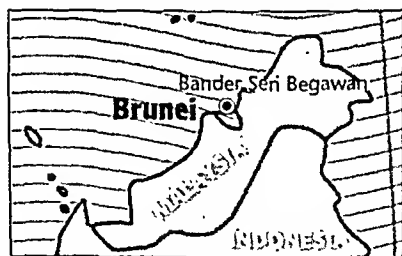
Indian Mission In Brazil: Embassy of India, SHIS-QL-0B, Conj. 0B Casa 01 Lago Sul, CEP-71620-2B5, Brasilia DF, Brasil, Tel: 00-55-61-248-4006 (4 lines) Fax: 00-55-61-2485486/7B49.

E-mail:indemb@indianembassy.org.br

Web: www.indianembassy.org.br

25. Brunei

(Brunei Darussalam) State of Brunei Darussalam Negara Brunei Darussalam



Capital: Bander Seri Begawan (formerly called Brunei Town); **Area:** 5,765 sq.km; **Population:** 379,444; **Languages:** Malay, English, Chinese; **Religions:** Muslim-67%, Buddhist-13%, Christian-10%, Indigenous beliefs and others-10%; **Literacy:** 93.9%; **Life Expectancy:** 75.01; **Currency:** Brunei Dollar (\$1=1.69); p.c.i: \$ 23,600; **Date of Independence:** 1st January, 1984.

Government Type: Constitutional sultanate; Sultan and PM: Haji Hassanal Bolkiah.

History: Negara Brunei Darussalam on the

northern side of the island of Borneo lies between two Malaysian territories, Sabah and Sarawak. Brunei Malays, mostly Muslims, form more than half of the population. The Sultanate, once a powerful and independent kingdom, was annexed by Britain and was granted full internal autonomy in 1971. Became a fully sovereign and independent state on Jan. 1, 1984.

Economy: Oil and natural gas are Brunei's most valuable resources. Much of Brunei's oil comes from the offshore Ampa field. Over 40% of GDP is derived from oil and gas exports. Rice is the chief food crop. Also grown are bananas, vegetables, cassava and pepper. Other crops are coconuts, sago, cork and rubber. Rubber is an export item. The Sultan of Brunei is one of the world's richest men. The Sultan's son Prince-al-Muhtadee Billah is the heir to Brunei's throne.

Recent Events: • Prince Billah married a commoner in September 2004.

Mission in India: Brunei Darussalam High Commission, A-4, Poorvi Marg, Vasant Vihar, New Delhi-110057. Tel: 26148340, 26148343; Fax: 2614 2101.

E-mail: suhtindb@del3.vsnl.net.in

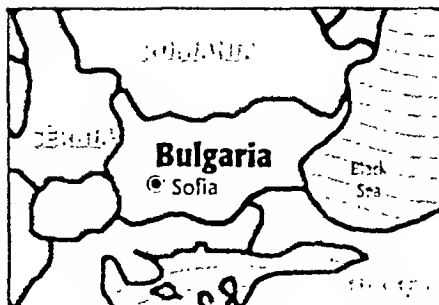
Indian Mission in Brunei: High Commission of India, 'Baitussyfaa', Simpang 40-22, Jalan Sungai Akar, Bandar Seri Begawan BC 3915, Brunei Darussalam. Tel: 00-673-2-339947; Fax: 00-673-2-339783.

E-mail: hicom ind@brunet.bn

Web: brunet.bn/gov/emb/india

26. Bulgaria

(Republic of Bulgaria) - Republika Bulgaria
Capital: Sofia; Other Large Cities: Plovdiv, Dobrich; Area: 110,912 sq km; Population: 7,385,367; Languages: Bulgarian, Turkish; Religions: Bulgarian Orthodox-82.6%, Muslim-12.2%, others-5.2%; Literacy: 98.6%; Life Expectancy: 72.3; Cur-



rency: Lev (\$1=1.54); p.c.i: \$ 9,600; Date of Independence: 3rd March, 1878.

Government Type: Parliamentary Democracy; President: Georgi Parvanov; PM: Sergei Stanishev.

History: Situated on the Black Sea in eastern Balkan Peninsula, Bulgaria was founded in 681. Monarchy was abolished and a people's republic was proclaimed in 1946. The country's first free election after four decades of communist rule was held in 1990, and an 11-member Corporate Presidency was elected to power. In Oct. 1991, a non-communist government was elected. In Apr. '97 Bulgaria's reformist Union of Democratic Forces scored a resounding victory in parliamentary elections. The country became a member of NATO in 2003.

Economy: Principal products: Grains, tobacco, fruits, vegetables. Minerals: Coal, iron ore, copper, lead and zinc. Industry: Crude steel, pig iron, cement, chemicals, textiles, processed food.

Mission in India: Embassy of the Republic of Bulgaria, EP 16/17, Chandragupta Marg, Chana-kyapuri, New Delhi - 110021. Tel: 26115549, 26115551, 24108048; Fax: 26876190.

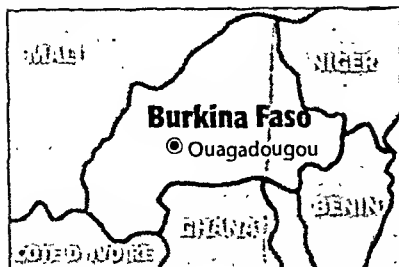
E-mail: bulemb@mantraonline.com

Website: www.bulgariaembindia.com

Indian Mission in Bulgaria: Embassy of India, 31, Patriarch Evtimii Blvd., Sofia, Bulgaria. Tel: 00-359-2-9867 359-2-9801289, 9814124.

E-mail: india@inet.bg

27. Burkina Faso



Capital: Ouagadougou; **Other Large Cities:** Koudougou, Banfora; **Area:** 274,200 sq km; **Population:** 13,902,972; **Languages:** French and Sudanic tribal languages; **Religions:** Tribal beliefs-40%, Muslim-50%, Christian-10%; **Literacy:** 26.6%; **Life Expectancy:** 48.85; **Currency:** CFA Franc (\$1=518.98); **p.c.i:** \$1,300; **Date of Independence:** 5th August, 1960.

Government Type: Parliamentary Republic; **Head of State:** Blaise Compaore.

History: The Republic of Burkina Faso in West Africa is a landlocked state surrounded by Mali, Niger, Benin, Togo, Ghana and Cote d'Ivoire.

Formerly a province of French West Africa called Upper Volta, the country gained full independence in 1960. Name changed to Burkina Faso in 1984.

Economy: It is almost exclusively an agricultural country with 80 per cent of the population dependent on agriculture. Livestock raising is highly developed. Principal crops are sorghum, millet, yams, cotton, rice, peanuts and karite. Industry is limited to local handicrafts and processed agricultural products. The country is heavily dependent on foreign aid. Some 2 million of its citizens live in nearby countries, most of them in Cote d'Ivoire and Ghana. **Life expectancy:** male 45, female 47.

Mission in India: Embassy of Burkina Faso G-5, Anand Niketan, New Delhi-110 021. Tel: 224671678, 24671679; Fax: 24671745.

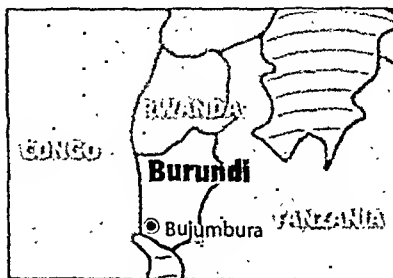
E-mail: emburmd@bol.net.in

Consulate: Mumbai: Tel: 23643093, Fax: 23645796.

E-mail: bhojwani@pn2.vsnl.net.in

28. Burundi

(Republic of Burundi)-Republikay' Ubu-rundi



Capital: Bujumbura; **Other Large Cities:** Kitega; **Area:** 27,834 sq.km; **Population:** 8,090,068; **Languages:** French and Kirundi; **Religions:** Christian-67%, indigenous beliefs-23%, Muslim-10%, Protestant-5%; **Literacy:** 51.6%; **Life Expectancy:** 50.81; **Currency:** Burundi Franc (\$1=980.00); **p.c.i:** \$ 700; **Date of Independence:** 1st July, 1962.

Government Type: Republic; **President:** Pierre Nkurunziza.

History: The Republic of Burundi is a small state in east central Africa. Burundi attained independence on July 1, 1962. Prior to independence, it formed part of the Belgian-administered UN Trust Territory of Rwanda and Urundi.

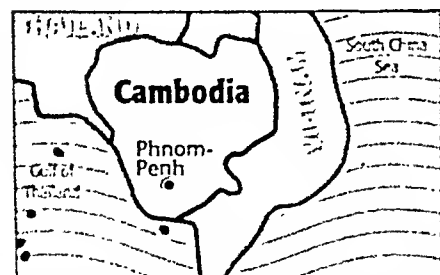
The population consists of Hutu or Bahutu tribesmen (85%), Tutsi or Watutsi people and Twa or Batwa pygmies. One of Africa's poorest and most densely populated states and scene of one of the continent's worst tribal wars. An unsuccessful Hutu rebellion in 1972-73 left 10,000 Tutsi and 150,000 Hutu dead. In the 1980s, a Tutsi-dominated regime pledged itself to ethnic reconciliation. In the first democratic presidential election,

In June, 1993, a Hutu was elected. President Cyprien Ntarya-mira, along with Rwandan counterpart, was assassinated in April, 1994. Amnesty International puts the number killed in ethnic violence at over 100,000. Another 700,000 fled to neighbouring countries. In July, 1996, in a coup by the Tutsi-dominated army, Maj. Pierre Buyoya, the minority Tutsi strongman, seized power from President Sylvestre. Ethnic strife continued. In Apr. 2003, a Hutu president D. Ndayizeye assumed power fighting continues.

Economy: Burundi is a landlocked, resource-poor country with an underdeveloped manufacturing sector. The economy is predominantly agricultural with 90% of the population dependent on subsistence agriculture. Economic growth depends on coffee and tea exports, which account for 90% of foreign exchange earnings.

29. Cambodia

(Kingdom of Cambodia) Preah Reach Ana Pak Kampuchea



Capital: Phnom-Penh; **Other Large Cities:** Battambang, Kampong Chan; **Area:** 181,035 sq km; **Population:** 13,881,427; **Languages:** Khmer, French; **Religions:** Theravada Buddhist-95%, others-5%; **Literacy:** 73.6%; **Life Expectancy:** 59.29; **Currency:** Riel (\$1=4055.00); **p.c.i:** \$ 2,200; **Date of Independence:** 9th November, 1953.

Government Type: Constitutional Mon-

archy; **Head of State:** King Norodom Sihamoni; **PM:** Hun Sen.

History: Situated on the Indo-China Peninsula in south-east Asia, the People's Republic of Kampuchea changed its name to the original one Cambodia in May, 1989. For some time—between Oct. 1970 and May 1975—the country was also known as Khmer Republic.

In May, 1993, the country held multi-party elections. An interim government, was set up by three parties, ending the 14-year reign of the Vietnamese-installed administration. In Sept., 1993, a new constitution was signed, restoring Prince Sihanouk as King of Cambodia. Khmer Rouge was outlawed in July, 1994. They in turn, formed a provisional government.

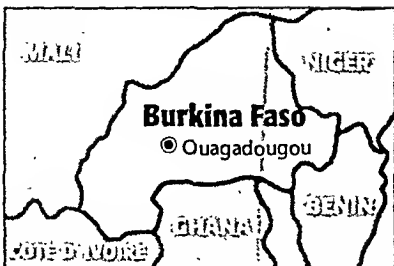
In July 1997, second PM Hun Sen took control of Phnom Penh and became the supreme leader of the country. His rival, first PM Norodom Ranariddh, fled the country. The royalist Funcinpec party of Ranariddh challenged the new first PM Ung Huot's election. Ranariddh was sentenced in absentia in March to 5 years' R.I. by a military court. On Apr. 15, Pol Pot died. Hun Sen emerged the winner in the election of July, '98.

Economy: Cambodia is an under-developed country with 50 per cent of its land covered by virgin forests. Chief crops: Rice (occupies 90 per cent of arable land), maize, beans, black pepper, rubber. Cattle rearing and fishing are fairly well-developed. Tonle Sap is one of the world's richest sources of freshwater fish, and most farmers are fishermen, too. The forests are rich in valuable timber. Minerals: Iron, copper, manganese and gold. Industry: Rice milling, wood and rubber.

Angkor Wat, built from 9th to 12th century, the largest cultural monument in the world, is the major tourist attraction.

Recent Events: In February 2005, opposition leader Sam Rainsy and two

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Mission In India: Embassy of Burkina Faso G-5, Anand Niketan, New Delhi-110 021. Tel: 24671678, 24671679; Fax: 24671745.

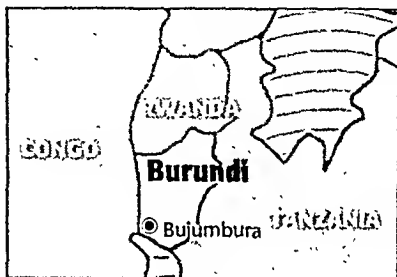
E-mail: emburmd@bol.net.in

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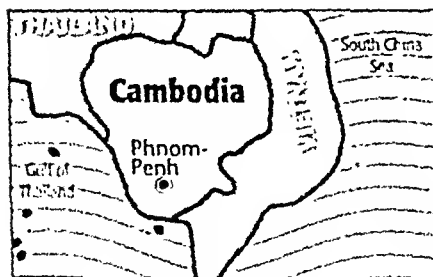
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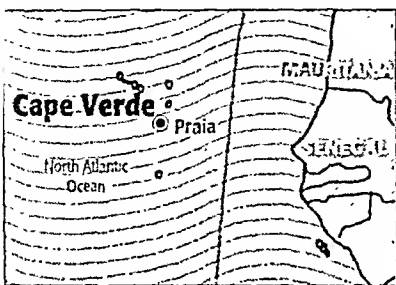
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Angkor Wat, built in the 12th century, the largest collection of ancient stone carvings in the world is the main attraction.

Recent Events: In 1993, the country held multi-party elections. An interim government, was set up by three parties, ending the 14-year reign of the Vietnamese-installed administration.

32. Cape Verde

Republic of Cape Verde/República de Cabo Verde



Capital: Praia; Area: 4033 sq.km; Population: 420,979; Languages: Portuguese, Crioulo; Religions: Roman Catholic (infused with indigenous beliefs), Protestant (mostly Church of the Nazarene); Literacy: 76.6%; Life Expectancy: 70.73; Currency: Escudo (\$1=87.6); p.c.l: \$ 6,200; Date of Independence: 5th July, 1975.

Government Type: Republic; President: Pedro Pires; PM: Jose Maria Neves.

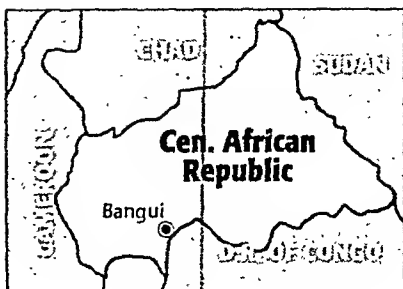
History: Cape Verde is an archipelago of 15 islands in the Atlantic, 600 km west of Dakar, Senegal. Volcanic in origin, the islands are divided into two groups: Barlavento (windward) and Sotavento (leeward). Most Cape Verdeans are descendants of the first Portuguese colonists who came in 1462 and the African slaves brought in soon after. The islands won independence on July 5, 1975.

Economy: Repeated droughts and famines have made Cape Verde poorer. Chief crops are banana, coffee, coconuts, sugarcane, maize, beans. Fishing is important. Minerals: salt.

33. Cen. African Republic

Republique Centrafricaine

Capital: Bangui; Other Large Cities: Bambari, Bouar; Area: 622,984 sq .km; Population: 4,303,356; Languages: French and Sangho;



Religions: Indigenous beliefs-35%, Protestant-25%, Roman Catholic-25%, Muslim-15%; Literacy: 51%; Life Expectancy: 43.54; Currency: CFA Franc (\$ 1=518.98); p.c.l: \$ 1,100; Date of Independence: 13th August, 1960.

Government Type: Republic; President: Francois Bozize; PM: Elie Dote.

History: The Central African Republic lies in the heart of equatorial Africa. It became self-governing in 1958, and fully independent in 1960, as a member state of the French Community. In 1966 Col. Jean Bedel Bokasa, Chief of Staff of the Army, ousted President David Dacko and seized control of the government.

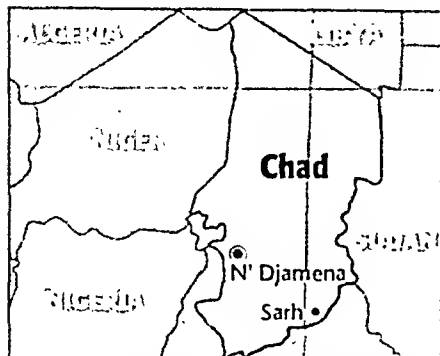
Bokasa was made President for life in 1972. In 1976, he set himself up an emperor, after the Napoleonic pattern. In 1979 a popular uprising drove him out. There was another coup in 1981. A civilian government was installed in 1993.

A government of national unity was formed in June, 1996, after an army mutiny of a month earlier was suppressed with the help of French troops. There was another mutiny in Jan. '97, which ended after French intervention.

Economy: Principal agricultural products are cotton, coffee, groundnuts and tobacco. Cotton leads in exports. Diamonds account for half of the country's export earnings. Uranium mining is becoming increasingly important. Industry: timber, textiles, light manufacturing.

34. Chad

(Republic of Chad) Republique du Tchad



Capital: N'Djamena; Other Large Cities: Sarh, Moundou; ; Area: 1,284,000 sq.km; Population: 9,944,201; Languages: French, Arabic and over 100 tribal languages; Religions: Muslim-51%, Christian-35%, Animist-7%, others-7%; Literacy: 47.5%; Life Expectancy: 47.52 ; Currency: CFA Franc (\$ 1=518.98); p.c.i: \$ 1,500 ; Date of Independence: 11th August, 1960.

Government Type: Republic; President: Idriss Deby; PM: Pascal Yoadimnadj.

History: The Republic of Chad, a landlocked country in North Central Africa, was a province of French Equatorial Africa. The country gets its name from Lake Chad, which lies on the western border with Niger and Nigeria. It became independent on August 11, 1960. Northern Muslim rebels have fought Southern Christian government and French troops since 1966. Idriss Deby took control in 1990.

Economy: The country's economy is entirely rural and based on agriculture and animal husbandry. Cotton and meat are the main exports. Cattle, sheep and camels are raised.

35. Chile

(Republic of Chile) Republica de Chile

Capital: Santiago; Other Large Cities: Valparaiso, Antofagasta; Area: 756,626 sq.



km; Population: 16,134,219; Languages: Spanish; Religions: Roman Catholic-89%, Protestant-11%; Literacy: 96.2%; Life Expectancy: 76.77; Currency: Peso (\$ 1= 542.75); p.c.i: \$ 11,300; Date of Independence: 18th September, 1810.

Government Type: Republic; Head of State & Govt (President): Michelle Bachelet.

History: The Republic of Chile lies on the western seaboard of South America, occupying the strip of land between Peru and Bolivia in the north to Cape Horn in the south.

Originally a Spanish colony, Chile became independent in 1810. It is the first South American country to elect a Marxist Govt. (under Salvador Allende in 1970) which fell in a military coup in 1973. Human rights violations marked the rule of Augusto Pinochet, removed from office in 1989. Pinochet was arrested in London in Oct. '98, but returned to Chile in March, 2000. Put under house arrest, he was declared to be unfit to stand trial in July 2001.

Economy: Though wheat, other cereals, potatoes, beans etc are cultivated, Chile has to import about one-third of its food. It is one of world's largest producers and a leading exporter of copper. There are significant deposits of nitrate, gold, silver, lithium, molybdenum and iron ore. Oil production provides about half the oil required by the country. Exports: marine products and fruits. 30 percent of Chile's trade is with Asian countries, 38% with EU, and the Americas. Industries: Fish, tiles, wood products.

Tierra del Fuego is the largest island in the archipelago of the same name at the southern tip of S. America. Part of the island is in Chile, part in Argentina.

Recent Events: In January, Supreme Court upheld indictment of Gen. Pinochet for nine kidnappings and one homicide during his dictatorship.

Mission in India: Embassy of the Republic of Chile, 146, Jor Bagh, New Delhi-110003; Tel: 24617123, 24617165, 24617270; Telefax: 91-11-24617102.

E-mail: embchile@vsnl.com

Indian Mission in Chile: Embassy of India, 871, Triana, Post Box No. 10433, Santiago, Chile. Tel: 00-56-2-2352005, 2352633; Fax: 00-56-2-2359607.

E-mail: embindia@entelchile.net

36. China

(People's Republic of China) Zhonghua Renmin Gonghe Guo

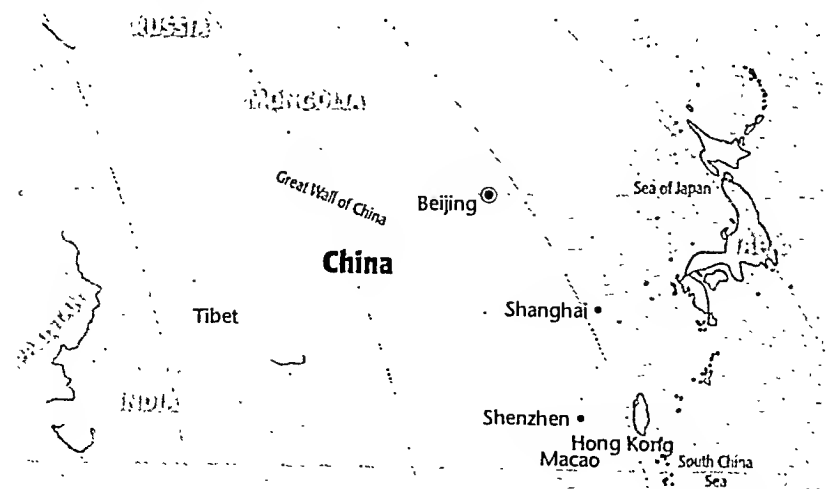
Capital: Beijing (Peking); **Other Large Cities:** Shanghai, Canton, Shenzhen; **Area:** 9,561,000 sq.km; **Population:** 1,313,973,713; **Languages:** Chinese (Mandarin) and other

local languages; **Religions:** Officially Atheist, Buddhism, Taoism, Muslim, Christian; **Literacy:** 90.9%; **Life Expectancy:** 72.58 ; **Currency:** Renminbi (Yuan) (\$ 1=8.00); **p.c.i:** \$ 6,800; **Date of Independence:** 221 BC (unification under the Qin or Ch'in Dynasty); 1st January, 1912 (Qing Dynasty replaced by a Republic); 1st October 1949 (People's Republic established)

Government Type: Communist state; **President:** Hu Jintao; **PM:** Wen Jiabao.

History: The most populous country in the world and the third largest in area, China is made up of 22 provinces, 5 autonomous regions and four municipalities. It occupies most of the habitable mainland of East Asia. Two-thirds of the territory is mountainous or desert; only one-tenth is cultivated. The eastern half of China is one of the world's best-watered lands. Three great river systems (the Chang or Yangtze, Huang or Yellow and Xi) provide water for the farmlands.

One of the oldest countries in the world, China became a republic in 1911. Following internal conflicts after World War II involving the Kuomintang, Communists and other factions, China came under the domination of



Communist armies. The People's Republic of China was proclaimed in Peking on October 1, 1949, under Mao Tse-Tung. The Kuomintang govt. moved to Taiwan, Dec. 8, 1949. Mao died in 1976 and Deng Xiaoping succeeded him as the 'paramount leader' of China. Deng died in 1997 and Jiang Zemin came to power.

On Oct. 26, 1971 China was admitted a member of the UN, displacing Nationalist China (Taiwan).

Economy: China is essentially an agricultural country. The main crops are rice, tea, tobacco, sugarcane, jute, soya, groundnut and hemp. The main forest products are teak and tung oil. Among the principal industries are cotton and woollen mills, iron, leather and electrical equipments. The chief minerals are coal, manganese, iron ore, gold, copper, lead, zinc, silver, tungsten, mercury, antimony and tin. Petroleum industry is steadily growing.

In late 1978, the Chinese leadership began moving the economy from a Soviet-style centrally planned economy to a more market-oriented system. The result has been a quadrupling of GDP since 1978. In 2002, with its 1.28 billion people but a GDP of just \$ 4600 per capita, China stood as the second largest economy in the world after the US (measured on a purchasing power parity basis).

China is a nuclear power well advanced in space technology. It launched its first earth satellite in April, 1970.

Student uprising in 1989 for political reform and liberalisation was put down by the government. Tiananmen Square, outside the Great Hall of the People was the main scene of the demonstrations. It is estimated that 5000 people died and 10,000 were injured. China released its top dissident leader Wang Dan in Apr. 98.

China intends to downsize its three million-strong military to 2.5m. In July '99, China banned the quasi-religious sect Falun Gong. In early '99, the constitution was amended so as to bolster private enterprise. The govt.

follows a one-child per family policy. It targets zero population growth by 2010.

Tibet: One of the five autonomous regions, Tibet is a thinly populated region of high plateau and massive mountains. Capital: Lhasa, and population about 2.44 m., of whom 500,000 are Chinese. China installed a Communist govt. in 1951, replacing the theocratic Lamaist Buddhist rule. There was an uprising in 1959. It was crushed, and Buddhism was almost totally suppressed. The Dalai Lama and 100,000 Tibetans fled to India.

Recent Events: Work on the structure of the Three Gorges Dam, the world's largest hydropower project, was completed in May 2006. A new railway has been opened linking Tibet to China. The 1100km Qinghai-Tibet railway has been built through some of the most difficult terrain on earth, and rises at one point to 5072 m above sea level.

Mission in India: Embassy of the People's Republic of China, 50-D Shantloath, Chanakyaapuri, New Delhi-110021. Tel: 26881249; Fax: 26882024.

E-mail: chinaemb_in@mfa.gov.cn

Indian Mission in China: Embassy of India, 1, Ritan Dong Lu, Beijing 100600, China. Tel: 00-86-10-65321308, Fax: 00-86-10-65324684.

E-mail: indembch@public3.bta.net.cn

Hong Kong

Hong Kong became a Special Administrative Region of China on July 1, '97 when the colony was handed over by Britain, which ruled it for 156 years.

Capital: Victoria. **Area:** 1,171 sq km. **Population:** 6,940,412. **Languages:** English and Cantonese. **Religion:** Confucianism and Buddhism. **Literacy:** 93.5%. **Currency:** Hong Kong Dollar (\$1=7.75¢) plus \$ 12,000. **Date of Independence:** Special Administrative Region of China.

Government Type: Limited Democracy. **Chief Executive:** Donald Tsang

Lying along the south east coast of China, at the mouth of the Canton river, Hong Kong comprises Hong Kong island, Kowloon Peninsula, the New Territories and over 230 small islands. Hong Kong became a British colony in 1843. The New Territories were acquired by Britain in 1898 by lease for 99 years. By an agreement reached in 1984, China recovered sovereignty over Hong Kong in July 1997.

The population is almost entirely Chinese with a sprinkling of other nationalities. It is one of the world's greatest transshipment ports.

Indian Mission In Hong Kong: Consulate General of India, 16-D United Centre, 95, Queensway, Hong Kong. Tel: 00-852-25284028, 25272275; Fax: 00-852-28664124.

E-mail: cg@indianconsulate.org.uk/
consular@indianconsulate.org.hk

Web: www.indianconsulate.org.hk

Macao

Capital: Macao; **Area:** 15.5 sq.km; **Population:** 453,125; **Languages:** Portuguese and Cantonese; **Religions:** Confucianism; **Literacy:** 94.5%; **Currency:** Pataca (\$1 = 7.99); **p.c.i.:** \$ 22,000.

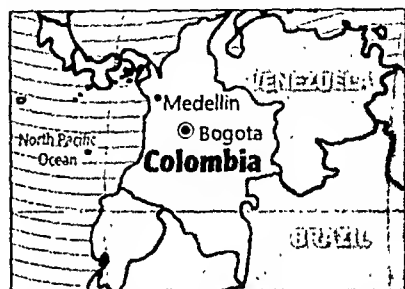
Chief Executive: (Hau-wah) Edmund Ho.

Macao or Macau is a former Portuguese territory in South China, at the mouth of the Canton river. The territory consists of the Macao peninsula and the adjoining islands of Taipa and Coloane. Portugal granted it broad autonomy in 1976. As per the agreement between Portugal and China, Macao reverted to China on Dec. 20, 1999. China has permitted Macao to continue as an independent territory mainly because of the big entrepot trade it commands. Macao is a free market for gold and an infamous centre of smuggling and gambling. China has pledged to Portugal that it will implement the 'one country two systems' principle in Macao.

The population is almost entirely Chinese. Industry, once restricted to matches and fireworks, now includes plastics, textiles, cameras, binoculars and such other consumer items. Cultivation is sparse. Only rice and vegetables are grown. Macao has an important fishing industry.

37. Colombia

(Republic of Colombia) Republica de Colombia



Capital: Bogotá; **Other Large Cities:** Medellin, Cartagena; **Area:** 1,139,000 sq. km; **Population:** 43,593,035; **Languages:** Spanish; **Religions:** Roman Catholic-90%; **Literacy:** 92.5%; **Life Expectancy:** 71.99; **Currency:** Peso (\$1=2,562); **p.c.i.:** \$ 7,900; **Date of Independence:** 20th July, 1810.

Government Type: Republic; **Head of State & Govt (President):** Alvaro Uribe Velez.

Colombia, the only nation named after Christopher COLUMBUS, situated in the north west of South America, extends up to the Isthmus of Panama. It is the only South American country that borders on both the Atlantic and Pacific oceans.

History: Colombia was discovered by Alonso de Ojeda in 1499. It was once a part of the South American Spanish Empire. In 1819, Simon Bolivar, the first President, broke the hold of Spain. Bolivar united New Granada, as it was called, with Venezuela and Ecuador in the Greater Colombia Confedera-

tion in 1819. Venezuela and Ecuador broke away in 1929-30, and Panama withdrew in 1903.

The country is caught in the grip of a vicious guerrilla war that has claimed 40,000 lives in the past decade. The two main Left-wing guerrilla groups are the Revolutionary Armed Forces of Colombia (FARC), and the smaller National Liberation Army.

Colombia is plagued by violence, mainly resulting from drug trafficking and govt's control measures. In recent years, the country has recorded the highest incidence of homicides per capita in the world.

Economy: Colombia is the largest producer and exporter of mild coffee. Other products are bananas, fresh flowers, cotton fibre, sugar, rice, tobacco, maize and wheat. The country is the world's leading producer of emeralds (50% world output) and is a substantial producer of platinum and gold; it holds the largest coal reserves in Latin America, rich nickel deposits and natural gas fields.

Industries include textiles, cement, motor vehicles, beverages, food products, chemicals and non-metallic minerals.

Colombia has 36 universities. The oldest—the Javeriana Pontifical Catholic University—was founded in 1622, and the National University in 1868. Gabriel Garcia Marquez, the internationally renowned writer, is Colombia's most famous son.

Recent Events: In February, 2006 Colombia and the US agreed on a free trade deal. In March, parties loyal to President Uribe won an overwhelming victory in parliamentary elections. In May, President Uribe won a second term in office.

Mission In India: Embassy of Colombia, 4/ 21, Shanti Niketan, New Delhi-110 021; Tel:26872771,26110773, 26110824; Fax: 26112486

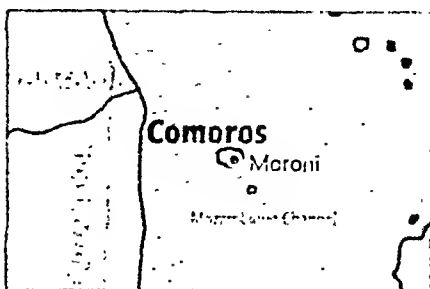
E-mail:emcolin@bol.net.in

Indian Mission In Colombia: Embassy of India, Cerrera 7, No.71-21, Oficina 1001,

Edificio Bancafe, Bogota DC, Colombia. Tel: 00-57-1-3174865, Fax:00-57-1-3174976, E-mail:indembog@cable.net.co

38. The Comoros

(Federal Islamic Republic of the Comoros)
Jumhuriyat al-Qumer al-Itthadiyah al-Islamiyah



Capital: Moroni; **Other Large Cities:** Fomboni, Mutsamudu; **Area:** 1862 sq.km; **Population:** 690,948; **Languages:** Arabic and Comoran; **Religions:** Islam-98%, Roman Catholic-2%; **Literacy:** 56.5%; **Life Expectancy:** 62.33; **Currency:** Comorian Franc (\$ 1=389.23); **p.c.i:** \$1,600; **Date of Independence:** 6th July, 1975.

Government Type: Independent Republic; **Head of State:** Azali Assoumani; **PM:** Hamada Madi.

History: The Comoro Islands lie at the northern end of the Mozambique Channel, between Africa and Madagascar. The archipelago consists of 3 islands—Grande-Comore, Anjouan and Moheli—and a number of islets and coral reefs. With neighbouring Mayotte, they were attached to Madagascar from 1914 to 1947, when the four islands became a French Overseas Territory. In a 1974 referendum, the three islands voted for independence while Mayotte voted to remain French. The main islands are volcanic and Grande-Comore, the largest island, is dominated by Mount Karthala (2361 m) volcano. The islands are densely

In Aug., '97, separatists from Anjouan seeking a return to French rule declared independence from the Comoros federation at a rally in Mutsamudu, the main town. They wanted a status similar to that of Mayotte, which now is a French overseas territory. In Feb. '98, voters in the Indian Ocean island of Nzwani voted for a complete breach from Comoros.

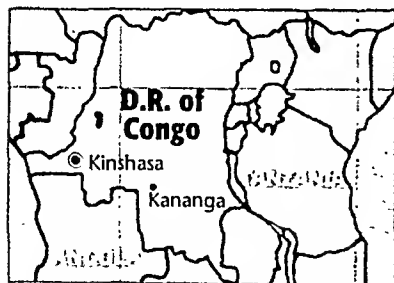
The population is a mixture of various strains—Arabs, Africans, Malagasys, Persians, Indians, Indonesians and Europeans. African and Arab influences are strongest. A purely European population of around 1500 completes the scene. Grande-Comoroe is the most populous island and has as capital and principal town, Moroni.

Economy: Agriculture is the mainstay of the economy. (Vanilla, copra, perfume plants, fruits). **Industry:** Perfumes.

Mission in India: Hon.Consulate, B-50 Gulmohar Park, New Delhi. Tel:26791100; Fax: 26791002.

39. Congo, D.R. of (Formerly Zaire)

Democratic Republic of the Congo



Capital: Kinshasa; **Other Large Cities:** Lubumbashi, Kananga; **Area:** 2,344,885 sq km; **Population:** 62,660,551; **Languages:** French, Kiswahili, Lingala and other African languages; **Religions:** Roman Catholic-50%, Protestant-20%, Kimbanguist-10%,

Muslim-10%, others-10%; **Literacy:** 65.5%; **Life Expectancy:** 51.46; **Currency:** Congolese Franc (\$1= 447.60); **p.c.i:** \$ 700 ; **Date of Independence:** 30th June, 1960.

Government Type: Dictatorship; **President:** Gen. Joseph Kabila.

History: Originally a Belgian colony (Belgian Congo), Zaire, in west central Africa, became independent on June 30, 1960. Until Oct. 1971, Zaire was known as the Democratic Republic of Congo or Congo (Kinshasa). In 1971, the name of River Congo was changed to River Zaire.

Economic difficulties plagued Zaire in the 1980s and the situation worsened in the 1990s. President Mobutu announced an end to a 20-year ban on multi-party politics in 1990. In 1991 he agreed that the political opposition should form a government. During 1994, Zaire was flooded with Hutu refugees (a million) from the ethnic bloodshed in Rwanda.

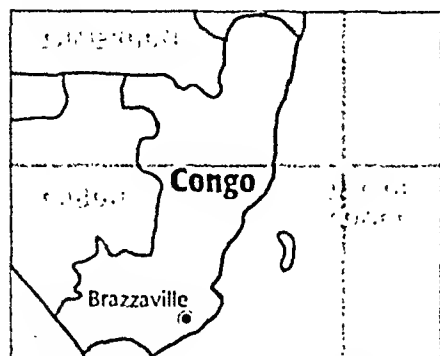
The year 1997 saw the fall of President Mobutu Sese Seko (in power since 1965), after a 7-month civil war. In May, Mobutu left Kinshasa and the next day rebel leader Laurent Kabila declared himself head of state. Zaire was renamed Democratic Republic of Congo. Lawrent Kabila was assassinated in January 2001. His son Joseph Kabila became the new leader. Two rebel leaders were sworn in VPs (July 03) • France sent a UN-backed peacekeeping force to eastern Congo to quell fighting between ethnic militias.

Economy: The major assets of Congo are her copper mines and the diamond deposits. The country is rich in other minerals like cobalt (60% of world reserves), cadmium, manganese, zinc and uranium. The forests abound in high class wood like mahogany, ebony and teak. Principal agricultural products are coffee, palm oil, rubber, sugarcane, maize, rice, cassava and plantains. Main manufactures are tobacco, textiles, wood products, metal items, building materials, foodstuffs and beverages.

Mission in India: Embassy of the Democratic Republic of Congo, D-6, Anand Niketan, New Delhi-110 021. Tel: 51660976.
E-mail: CongoEmbassy@yahoo.co.in

40. Congo

(Republic of the Congo) Republique du Congo



Capital: Brazzaville; **Other Large Cities:** Pointe-Noire, Loubomo; **Area:** 342,000 sq km; **Population:** 3,702,314; **Languages:** French, Lingala, Congo, Teke; **Religions:** Christian-50%, Animist-48%, Muslim-2%; **Literacy:** 83.8%; **Life Expectancy:** 52.8; **Currency:** CFA Franc (\$1=518.98); **p.c.i.:** \$ 750; **Date of Independence:** 15th August 1960.

Government Type: Republic; **President:** Gen. Denis Sassou Nguesso.

History: Formerly part of the French Equatorial Africa, the Republic of Congo in West Central Africa became autonomous within the French Community in 1958 and fully independent in Aug. 1960. In 1963, the country adopted a Marxist-Leninist stance. In 1969, a new constitution was promulgated. Marxism was renounced in 1990. A democratically elected government came into office in 1992.

In June 97, fighting broke out between armed forces backing President Lissouba and his once marxist predecessor Denis Sassou Nguesso. Troops loyal to the latter took control of Brazzaville in October.

Economy: Agriculture: Palm oil and kernels, cassava, cocoa, coffee, tobacco. Industry: Processed foods, textiles, cement, metal industries. Main exports: timber, diamonds, palm oil, crude petroleum, sugar and groundnuts.

Mission in India: Embassy of the Republic of Congo stationed at Beijing.

41. Costa Rica

(Republic of Costa Rica) Republica de Costa Rica



Capital: San Jose; **Other Large Cities:** Alajuela, Cartago; **Area:** 51,100 sq.km; **Population:** 4,075,261; **Languages:** Spanish; **Religions:** Roman Catholic-76.3%, Evangelical-13.7%, Jehovah's Witnesses-1.3%, Other Protestant-0.7%, others-4.8%, None-3.2%; **Literacy:** 96%; **Life Expectancy:** 77.02; **Currency:** Colon (\$1=512.195); **p.c.i.:** \$ 11,100; **Date of Independence:** 15th September 1821.

Government Type: Democratic Republic; **Head of State & Govt (President):** Oscar Arias Sanchez.

The Republic of Costa Rica (the Rich Coast) is a Central American state. It lies between Nicaragua and Panama.

History: For nearly three centuries Costa Rica formed part of the Spanish American dominion. In 1821 it became independent.

Economy: The country is mainly agricultural. Coffee is the most important crop, accounting for about half the exports. Other crops include banana, sugar.

In Aug., '97, separatists from Anjouan seeking a return to French rule declared independence from the Comoros federation at a rally in Mutsamudu, the main town. They wanted a status similar to that of Mayotte, which now is a French overseas territory. In Feb. '98, voters in the Indian Ocean island of Nzwani voted for a complete breach from Comoros.

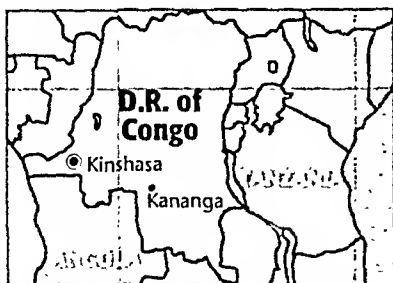
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Economy: Agriculture is the mainstay of the economy. (Vanilla, copra, perfume plants, fruits). **Industry:** Perfumes.

Mission in India: Hon.Consulate, B-50 Gulmohar Park, New Delhi. Tel:26791100; Fax: 26791002.

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Hstory: Originally a Belgian colony (Belgian Congo), Zaire, in west central Africa, became independent on June 30, 1960. Until Oct. 1971, Zaire was known as the Democratic Republic of Congo or Congo (Kinshasa). In 1971, the name of River Congo was changed to River Zaire.

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The year 1997 saw the fall of President Mobutu Sese Seko (in power since 1965), after a 7-month civil war. In May, Mobutu left Kinshasa and the next day rebel leader Laurent Kabila declared himself head of state. Zaire was renamed Democratic Republic of Congo. Lawrent Kabila was assassinated in January 2001. His son Joseph Kabila became the new leader. Two rebel leaders were sworn in VPs (July 03) • France sent a UN-backed peacekeeping force to eastern Congo to quell fighting between ethnic militias.

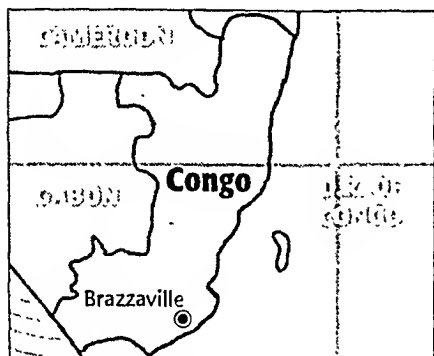
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Mission in India: Embassy of the Democratic Republic of Congo, D-6, Anand Niketan, New Delhi-110 021. Tel: 51660976.

E-mail: CongoEmbassy@yahoo.co.in

40. Congo

(Republic of the Congo) Republique du Congo



Capital: Brazzaville; Other Large Cities: Pointe-Noire, Loubomo; Area: 342,000 sq km; Population: 3,702,314; Languages: French, Lingala, Congo, Teke; Religions: Christian-50%, Animist-48%, Muslim-2%; Literacy: 83.8%; Life Expectancy: 52.8; Currency: CFA Franc (\$1=518.98); p.c.i: \$ 750; Date of Independence: 15th August 1960.

Government Type: Republic; President: Gen. Denis Sassou Nguesso.

History: Formerly part of the French Equatorial Africa, the Republic of Congo in West Central Africa became autonomous within the French Community in 1958 and fully independent in Aug. 1960. In 1963, the country adopted a Marxist-Leninist stance. In 1969, a new constitution was promulgated. Marxism was renounced in 1990. A democratically elected government came into office in 1992.

In June 97, fighting broke out between armed forces backing President Lissouba and his once marxist predecessor Denis Sassou Nguesso. Troops loyal to the latter took control of Brazzaville in October.

Economy: Agriculture: Palm oil and kenels, cassava, cocoa, coffee, tobacco. Industry: Processed foods, textiles, cement, metal Industries. Main exports: timber, diamonds, palm oil, crude petroleum, sugar and groundnuts.

Mission in India: Embassy of the Republic of Congo stationed at Beijing.

41. Costa Rica

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Government Type: Democratic Republic; Head of State & Govt (President): Oscar Arias Sanchez.

The Republic of Costa Rica (the Rich Coast) is a Central American state. It lies between Nicaragua and Panama.

History: For nearly three centuries Costa Rica formed part of the Spanish American dominion. In 1821 it became independent.

Economy: The country is a tropical. Coffee is the most important crop accounting for about 30% of exports. Other crops include banana, sugar, rice, and

Bananas, cocoa, cattle and, recently, sugar are exported. In recent years there has been a shift towards high-tech exports like computer chips and services. Now Costa Rica is the largest exporter of technology goods per capita in Latin America. After abolishing its army nearly half a century ago, the country has pumped large sums of money into education, creating a highly skilled workforce that reflects a population with a 95% literacy rate.

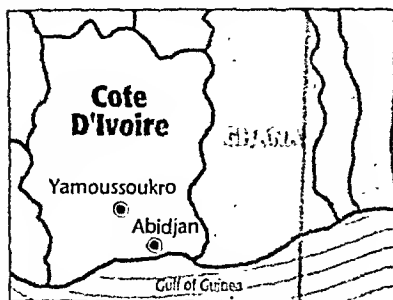
Industry: Pharmaceuticals, furniture, aluminium, textiles, tourism. People enjoy a relatively high standard of living. 93% have electricity. Silicon processors have brought prosperity to Costa Rica in recent years.

Mission In India: Hon. Consulate General of Costa Rica, D-388 Defence Colony, New Delhi-110 024. Tel: 24625670; Fax: 23327231;

E-mail: bradynd@de12.vsnl.net.in

42. Cote D'Ivoire (Ivory Coast)

(Republique de la Cote d'Ivoire)



Capital: Yamoussoukro (official), Abidjan (de facto); **Other Large Cities:** Bouake; **Area:** 322,462 sq.km.; **Population:** 17,654,843; **Languages:** French and Tribal; **Religions:** Christian-20-30%, Muslim-35-40%, Indigenous-25-40% (2001). The majority of foreigners (migratory workers) are Muslim-70% and Christian (20%); **Literacy:** 50.9%; **Life Expectancy:** 48.82; **Currency:** CFA Franc

(\$1=518.98); p.c.i: \$ 1,600; **Date of Independence:** 7th August, 1960.

Government Type: Republic; **President** Laurent Gbagbo; **PM:** Charles Konan Banny

Cote D'Ivoire in Western Africa is bordered by Mali and Burkina Faso in the north, Ghana in the east, the Gulf of Guinea in the south and Liberia and Guinea in the west.

History: The Republic of Ivory Coast once an overseas territory of France, became independent on August 7, 1960. From 1986, the French version of the name became the only correct title. There are about 60 ethnic groups, the principal being the Baule, the Bete and the Senufo. General Robert Guei seized power in Dec 1999. There was a coup attempt in 2002. A peace agreement was signed in 2003, but there was trouble again. A power-sharing plan was arrived at in Mar. 03, and ceasefire signed in May.

Economy: Agriculture, forestry and fishing employ 90 per cent of the population. Cote D'Ivoire is world's largest cocoa producer, the third most important coffee producer and the most important African producer of timber. Sugar, cotton, bananas and pineapple are other important crops. Industrialisation has developed rapidly since independence, particularly food processing, textiles and saw mills. **Important minerals:** Diamonds and manganese.

Mission In India: Embassy of Cote D'Ivoire stationed at Moscow.

Hon. Consulate, Punj House, M-13 Connaught Place, New Delhi-110 001. Tel: 23415621.

E-mail: virendra@punj.com

Indian Mission in Cote D'Ivoire (Ivory Coast): Embassy of India, Villa No. 105, rue L98, 7eme Tranche, Cocody/II Plateaux, Angre, 06 B.P. 318, Abidjan 06, Cote d'Ivoire. Tel: 00-225-22423769, 22427079; Fax: 00-22426649.

E-mail: indemabj@africaonline.co.ci

43. Croatia

(Republic of Croatia) Republika Hrvatska



Capital: Zagreb; **Other Large Cities:** Zagreb, Split; **Area:** 56,538 sq .km; **Population:** 4,494,749; **Languages:** Serbo-Croatian; **Religions:** Roman Catholic-87.8%, Orthodox-4.4%, Muslim-1.3%, Protestant-0.3%, others and unknown-6.2%; **Literacy:** 98.5%; **Life Expectancy:** 74.68; **Currency:** Kuna (\$1=5.7365); **p.c.i:** \$ 11,600; **Date of Independence:** 25th June, 1991.

Government Type: Parliamentary Democracy; **President:** Stipe Mesic; **PM:** Dr. Ivo Sanader.

History: Former Yugoslavia's second largest republic, Croatia in S.E. Europe, has an extensive Adriatic coastline.

Croats migrated to their present territory in the 6th century. Croatia was united with Hungary in 1091. In 1918, Croatia became a part of the new Kingdom of Serbs, Croats and Slovenes, which was renamed Yugoslavia in 1929. Croatia then became one of the six 'Socialist Republics' constituting the Yugoslav federation. On June 25, 1991, Croatia declared independence. Serbs rebelled, sparking a 7 month-long civil war. The Krajina and other predominantly Serb areas proclaimed the desire for union with Serbia. UN peace-keeping mission arrived at the beginning of 1992. European Community (EC) recognised Croatia on January 15, 1992. Fighting between ethnic Serbs and Croats continued. A

ceasefire with Serb rebels forming a self-declared republic of Krajina was agreed to in March, 1994. In Aug, '96, Croatia and Serbia agreed to resume normal diplomatic ties after years of hostility. Croatia joined NATO's extended family in May, 2000.

Ethnic breakdown: Croats-75%; Serbs-12%; others-13%.

Economy: Agricultural products: Wheat, maize, potatoes, olives, plums, livestock, timber. Industry: Textiles, chemicals, coal, lignite, cement, sugar, steel, plastics, textiles.

Croatia's spectacular Adriatic coastline has long been a major package-tourist attraction notably the ancient city of Dubrovnik, which took a severe battering from the Yugoslav army in 1991.

Nearly 70% of trade exchange between ex-Yugoslavia and India was with Croatia. Upto one-third of the Indian fleet for nearly 40 years was built in Croatian shipyards.

Mission in India: Embassy of the Republic of Croatia, A-15, West End, New Delhi-110 021. Tel: 26876871/72; Fax : 26876873

E-mail: croemnd@del1.vsnl.net.in

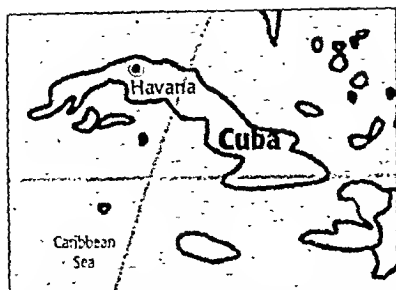
Indian Mission in Croatia: Embassy of India, Boskovicjeva 7A 10000, Zagreb, Croatia. Tel: 00-385-1-4873239, 4873240, 4873241; Fax: 00-385-1-4817907.

E-mail: embassy.india@zg.tel.hr Web: www: ring.net/india

44. Cuba

(Republic of Cuba) Republica de Cuba

Capital: Havana; **Other Large Cities :** Santiago de Cuba, Santa Clara; **Area:** 110,922 sq.km; **Population:** 11,382,820; **Languages:** Spanish; **Religions:** Nominally 85% Roman Catholic before Castro assumed power; Protestant, Jehovah's Witnesses, Jews, and Santería are also represented; **Literacy:** 97%; **Life Expectancy:** 77.41; **Currency:** Peso (\$1 = 20 CUP); **p.c.i:** \$ 3,500; **Date of Independence:** 1902.



Government Type: Communist State;
Head of State & Govt (President): Dr. Fidel Castro Ruz; **First Vice President:** Raul Castro Ruz.

History: Cuba, the largest island in the Greater Antilles group is known as the Pearl of the Caribbean Sea. It is formed by two main islands - the island of Cuba and the Isle of Youth - and more than 4000 keys and small isles. Its neighbours are USA, Mexico, Jamaica and Haiti.

Columbus discovered Cuba in 1492 and Spain ruled it for four centuries. In 1898 Cuba became an independent republic.

In 1959 Dr. Fidel Castro overthrew General Batista, the dictatorial president and took over power. Emigres made an unsuccessful invasion at the Bay of Pigs in Apr. 1961. In 1962 USA learned that USSR had brought nuclear missiles to Cuba. After a warning from President J.F. Kennedy, the missiles were removed. A communist constitution came into force in 1976, and direct parliamentary elections were permitted in 1992. In Jan. '98, Fidel Castro was re-elected president.

Economy: Cuba is the largest producer of sugar in the world. Tobacco is the second largest crop. Cattle, poultry and fishing have become important in recent years. Cuba is rich in nickel deposits. Copper, chromite and manganese are also found.

Industry: Cement, sugar, food-processing, oil, tobacco. Sugar, nickel and fishing are top three export industries.

Recent Events: In February 2006, propa-

ganda war escalated in Havana as President Castro unveiled a monument which blocked the view of illuminated messages - some about human rights - displayed on the US mission building. In July, President Castro underwent surgery and temporarily handed over control of the government to his brother Raul.

Mission in India: Embassy of the Republic of Cuba, E-1/9, Vasant Vihar, New Delhi-110 057. Tel: 26145459, 26143849, 26142515; Fax: 26143806.

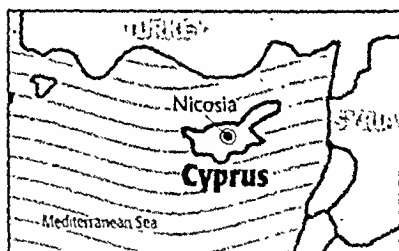
E-mail: embcuind@del6.vsnl.net.in

Indian Mission In Cuba: Embassy of India, Calle 21, No. 202, Esquina K, Vedado, La Havana, Cuba. Tel: 00-53-7-333777, 00-53-7-333169, 551700; Fax: 00-53-7-333287.

E-mail: eoilhav@ceniai.inf.cu

45. Cyprus

(Republic of Cyprus) Kypriaki Dimokratia (Greek)/Kibiris Cumhuriyeti (Turkish)



Capital: Nicosia; **Other Large Cities:** Limassol, Larnaca; **Area:** 9,251 sq.km; **Population:** 784,301; **Languages:** Greek, Turkish and English; **Religions:** Greek Orthodox-78%, Muslim-18%, Maronite, Armenian Apostolic and others-4%; **Literacy:** 97.6%; **Life Expectancy:** 77.82; **Currency:** Cyprus Pound (\$1=0.466). **p.c.i.:** \$ 21,600; **Date of Independence:** 16th August, 1960.

Government Type: Republic; **President & PM:** Tassos Papadopoulos.

History: The Republic of Cyprus lies in the North Eastern corner of the East Mediterra-

nean basin, at the meeting point of three continents—Europe, Asia and Africa. Cyprus became independent in 1960. In 1974 it was invaded by Turkey and nearly 40% of its territory is still under Turkish occupation. A Turkish Cypriot Federated State was proclaimed in 1975 and in 1983 the state unilaterally proclaimed itself as the 'Turkish Republic of Northern Cyprus' (TRNC). In 1994, informal talks were held between the Presidents of Cyprus and TRNC but no progress was made. In Aug'96, violence jolted Cypriots on both sides. UN attempts to reunify Cyprus have not been successful.

Economy: The healthy climate and the natural beauty of the island make it an ideal place for tourists.

Cyprus is mainly an agricultural island. Main agricultural exports are: potatoes, grapes, carrots, fresh vegetables, citrus, milk. Main industrial exports are: readymade clothing, footwear, cement, travel goods, plastic products, water pumps, furniture, cosmetics, etc.

Recent Events: In May, 2006 Greek Cypriots backed ruling coalition in parliamentary elections, endorsing its opposition to reunification efforts. In July, UN-sponsored talks between President Papadopolous and Turkish Cypriot leader Mehmet Ali Talat agreed a series of confidence-building measures and contacts between the two communities.

Mission in India: High Commission of the Republic of Cyprus, 106, Jor Bagh, New Delhi-110 003. Tel: 24697503, 24697508; Fax: 2462 8828.

E-mail: cyprus@del3.vsnl.net.in

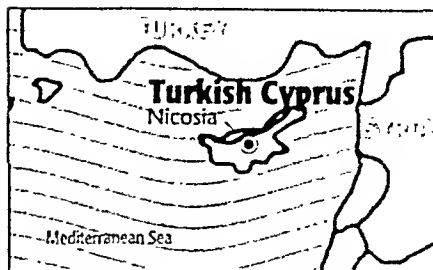
Web: www.cyprushedelhi.com

Indian Mission In Cyprus: High Commission of India, 3, Indira Gandhi Street, Montpamasse Hill, P.O. Box 25544, Engomi, 2413 Nicosia, Cyprus. Tel: 00-357-2-351741, 351170; Fax: 00-357-2-350402.

E-mail: india@spidernet.com.cy

46. Turkish Cyprus

Turkish Republic of Northern Cyprus



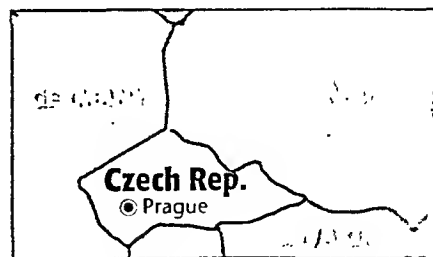
Capital: Nicosia; **Area:** 3355 sq.km; **Population:** 134,000 (1995 estimate); **Languages:** Turkish; **Currency:** Turkish Lira .

PM: Dervis Eroglu.

The Turkish - controlled area of Northern Cyprus unilaterally declared independence in 1983. It has been named 'Turkish Republic of Northern Cyprus.' The Republic is not internationally recognised although it does have trade relation with some countries. There is a 50-strong Legislative Assembly.

47. Czech Republic

(Ceska Republika)



Capital: Prague **Other Large Cities:** Brno, Ostrava. **Area:** 78,864 sq km; **Population:** 10,235,455 **Languages:** Czech; **Religion:** Roman Catholic-26.8%, Protestant-3.3%, unspecified-8.8%, unspecified-99%. **Life Expectancy:** 73 years. **The Koruna (\$1=22.55);** **Year of Independence:** 1918

Government Type: Parliamentary Democracy; **President:** Vaclav Klaus; **PM:** Jiri Paroubek.

History: The Czech Republic and Slovakia became independent states on January 1, 1993, when the Czech and Slovak Federal Republic (Czechoslovakia) was dissolved.

Czechoslovakia, a republic landlocked in Central Europe, was composed of 64% Czechs and 31% Slovaks. The Czechoslovak Socialist Republic was established in January 1969 as a federal state of two nations of equal rights. In 1990, the country changed its name to the Czech and Slovak Federative Republic and dropped 'socialist' to symbolise its departure from the communist past. Disputes between the two regions over post-communist reforms turned the union bitter. In June, 1992 the 74-year old federation's Czech and Slovak regions agreed to part.

The Czech republic is bounded by Germany, Poland, Slovakia and Austria. Czechs constitute 81.2%, Moravian and Silesians 13.7%, and Slovaks 3.1%. About 40% of people call themselves atheists. Czech Republic is a member of NATO.

Economy: Agriculture: Sugarbeet, wheat, potatoes, barley, maize, rye. Industry: Pig iron, crude steel, rolled steel products, cement, paper, sulphuric acid, synthetic fibres, sugar, beer, armaments, cars. Minerals: Coal, coalin, uranium.

Recent Events: In June 2006, general elections resulted in hung parliament.

Mission In India: Embassy of the Czech Republic, 50-M, Niti Marg, Chanakyapuri, New Delhi-110 021, Tel: 26110205, 26110318, 26110382, 26886218; Fax: 91-11-26886221.

E-mail: newdelhi@embassy.mzv.cz

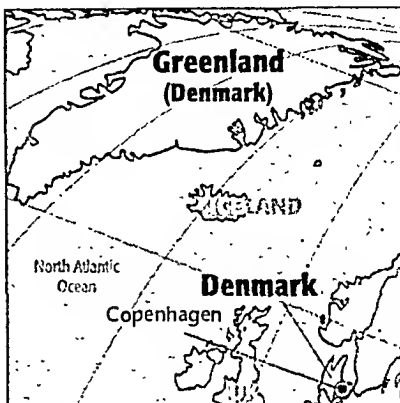
Web: mfa.cz/newdelhi

Indian Mission In Czech Republic: Embassy of India, Valdstejska 6, Malastrana, 118 00 Prague-1, Czech Republic. Tel: 00-420-2-57533490-93; Fax: 00-420-2-57533285, 57533378.

E-mail: indemprague@bohem.net.cz/
eiprague.comwing@nectraa.cz

48. Denmark

(Kingdom of Denmark) Kongeriget Danmark



Capital: Copenhagen; **Other Large Cities:** Odense, Alborg, Randers; **Area:** 43,074 sq km; **Population:** 5,450,661; **Languages:** Danish; **Religions:** Evangelical Lutheran-95%, Other Protestant and Roman Catholic-3%, Muslim-2%; **Literacy:** 99%; **Life Expectancy:** 77.79; **Currency:** Danish Krone (\$1=6.89); **p.c.i.:** \$ 34,600; **Date of Independence:** Denmark was first organised as a unified state in the 10th century. In 1849, Denmark became a Constitutional Monarchy.

Government Type: Constitutional Monarchy; **Head of State:** Queen Margrethe II; **PM:** Anders Fogh Rasmussen.

History: Denmark, the smallest of the Scandinavian countries, is situated in northern Europe between the North Sea and the Baltic Sea. It comprises the peninsula of Jutland, the Islands of Zealand, Funen and Bornholm and 480 smaller islands. Greenland, the world's largest island, and the Faeroe Islands also form part of the Kingdom of Denmark. No one in Denmark is more than 52 km from the sea.

No wonder that the Danes were Vikings a few generations ago.

Denmark is a constitutional monarchy, the Queen and the Parliament (Folketing) jointly holding legislative powers.

Economy: About 62 per cent of the land is under cultivation. Denmark is one of the largest exporters of dairy products. Fishing forms an important occupation. Denmark is famous for its co-operative institutions. The first co-operative society was established in 1866. Shipbuilding, machinery of different types, textiles, furniture, iron and steel-ware account for a major portion of industry. Danish exports include stylish furniture, the hi-fi equipment of Bang & Olufsen, and the ubiquitous plastic Lego bricks. Legal marriage between persons of the same sex has been permitted since 1989. Denmark is close to being the leading donor among industrialised countries. Foreigners form less than 5% of the population.

Recent Events: In January-February, diplomatic storm grew over cartoon depictions of the prophet Muhammad, published by a Danish newspaper in 2005, which angered many Muslims.

Mission in India: Royal Danish Embassy, 11-Aurangzeb Rd., New Delhi-110011. Tel: 23010900, 23010002/04, 23010899 (Visa); Telefax: 23792019, 23792891.

E-mail:denmark@vsnl.com

Indian Mission in Denmark: Embassy of India, Vangehusvej 15, 2100 Copenhagen, Denmark. Tel: 00-45-39299201, 39182888, 39182995; Telefax: 00-45-39270218.

E-mail:indemb@euroconnect.dk

Outlying Territories of Denmark The Faeroe Islands

Capital: Torshavn; **Area:** 1399 sq.km; **Population:** 47,246.

PM: Joannes Eidesgaard.

The islands, in the North Atlantic, are mountainous and of volcanic origin. The is-

lands have been represented in the Danish Parliament since 1851. They are self-governing in most matters.

Only 2% of the surface is cultivated. Grazing is the mainstay of the economy. Deep sea fishing is the most important sector.

Greenland

Capital: Nuuk (Godthaab); **Area:** 2,175,600 sq.km; **Population:** 56,361.

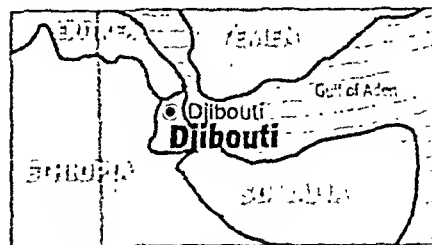
PM: Hans Enoksen. The world's largest island, Greenland lies between the North Atlantic and the Polar Sea. Over 80% of the area is ice-capped.

A Danish possession since 1380, Greenland became an integral part of the Danish Kingdom in 1953. In 1979 home rule was won by Greenland. With this, Greenlandic place names came into official use. Greenland is now Kalaallit Nunaat. The capital is Nuuk (old one Godthaab). Full internal self-government was attained in Jan., 1981.

Fish is the main product of the island. Greenland is the world's only source of natural cryolite, important in making aluminium.

49. Djibouti

(Republic of Djibouti) Jumhuriyya Djibouti



Capital: Djibouti; **Area:** 21,783 sq.km; **Population:** 486,530; **Languages:** French, Arabic, Afar, Issa; **Religions:** Muslim-94%, Christian-6%; **Literacy:** 67.9%; **Life Expectancy:** 43.17; **Currency:** Djibouti Franc (\$1 = 175); **p.c.i.:** \$ 1,300; **Date of Independence:** June, 1977.

Government Type: Republic; **President:** Ismail Omar Guelleh; **PM:** Mohamed Dileita Dileita

History: Djibouti, first known as French Somaliland and then as the French Territory of Afars and Issas, became independent on June 27, 1977 under the name of Djibouti. Lying between Ethiopia and Somalia and looking out on the Red Sea and the Gulf of Aden, the state is of extreme strategic importance.

Economy: The land is economically poor, being mostly volcanic desert with scattered plateaus and highlands. Agriculture is possible only in restricted areas with irrigation facilities. Goats, sheep and camels form the major wealth of the state. Salt is a major product. Huge salt deposits are found in the lakes of Alol and Assal. Trade is almost entirely based in the capital Djibouti. French aid as well as assistance from Arab countries is the mainstay of the economy. A 3 - year-long uprising by Afar rebels in the north belonging to the Front for the Restoration of Unity and Democracy (FRUD) ended with a peace accord in 1994. Ethiopia and Somalia have renounced their claims to Djibouti.

Mission In India: Embassy of the Republic of Djibouti stationed at Tokyo.

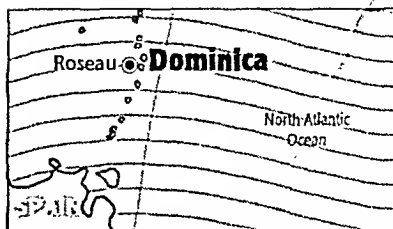
Mission In India: Honorary Consulate 3, Aurangzeb Lane, New Delhi-110011; Tel: 23011642/648; Telefax: 23011634.

E-mail: djibouti@spectranet.com

50. Dominica

(Commonwealth of Dominica)

Capital: Roseau; **Area:** 750 sq km; **Population:** 68,910; **Languages:** English and French Patois; **Religions:** Roman Catholic-77%, Protestant-15%, None-2%, others-6%; **Literacy:** 94%; **Life Expectancy:** 74.87; **Currency:** East Caribbean Dollar (\$1=2.70); **p.c.i.:** \$5,500; **Date of Independence:** 3rd November, 1978



Government Type: Parliamentary Democracy; **President:** Nicholas J.O. Liverpool; **PM:** Roosevelt Skerit.

History: Commonwealth of Dominica lies in the Lesser Antilles in Eastern Caribbean. Once a British protectorate, it assumed the status of a British Associate State in 1967 and became fully independent on Nov. 3, 1978.

The island is volcanic in origin and largely mountainous with numerous thermal springs. The population includes Negroes, Mulattoes, Carib Indians and Europeans.

Economy: Exports include bananas, coconuts, copra and fruits. Tourism is an important industry.

The French franc, the pound sterling and the East Caribbean dollar are legal tender.

Mission in India: Honorary Consulate of Commonwealth of Dominica, 283, Gulmohar Enclave, New Delhi-110011; Tel: 26862595; Fax: 26862595.

E-mail: shukla_dominica@hotmail.com

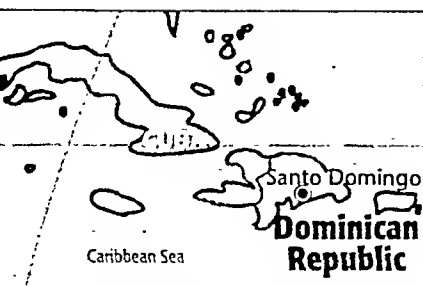
51. Dominican Republic

(Republica Dominica)

Capital: Santo Domingo; **Other Large Cities:** La Vega, San Pedro; **Area:** 48,442 sq km; **Population:** 9,183,984; **Languages:** Spanish; **Religions:** Roman Catholic-95%; **Literacy:** 84.7%; **Life Expectancy:** 71.73; **Currency:** Peso (\$1=32.87); **p.c.i.:** \$7,000; **Date of Independence:** 27th February, 1844.

Government Type: Republic; **Head of State & Govt (President):** Leonel Fernandez.

History: The Dominican Republic in the West Indies occupies the eastern two-third



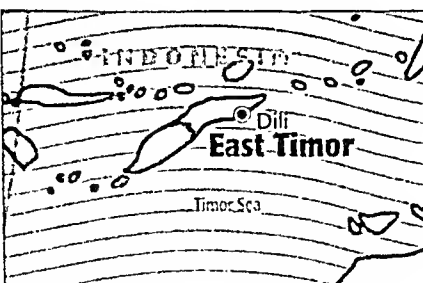
of Hispaniola, the second largest island of the Greater Antilles. Originally under Spain, the Dominican Republic became independent in 1844. The population is mainly composed of a mixed race of European (Spanish) and African blood.

Economy: The state is predominantly agricultural. The most important crops are sugarcane, coffee, cocoa, tobacco and rice. **Industry:** Sugar refining, textiles, cement.

Hurricane George struck the country in Sept., 1998. In 2003, Amelia Vega, was crowned Miss Universe.

52. East Timor

(Democratic Republic of East Timor)



Capital: Dili; **Area:** 14,874 sq km; **Population:** 1,040,880; **Languages:** Tetum & Portuguese (official), English and Bahasa Indonesian (working languages); **Religions:** Catholic-90%, Muslim-4%, Protestant-3%, Hindu-0.5%, Buddhist, Animist; **Literacy:** 58.6% (2001); **Life Expectancy:** 66.26; **Currency:** 1 US dollar and Indonesian Rupiah (\$1=9010); **p.c.l:** \$ 400; **Date of Independence:** 20th May, 2002.

Government Type: Republic; **President:** Xanana Gusmao; **PM:** Mari Alkatiri.

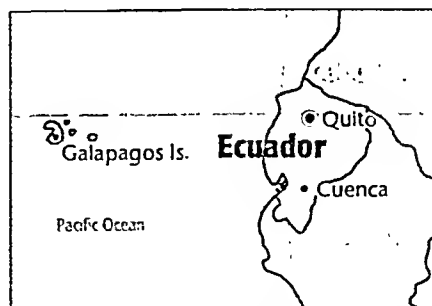
History: At midnight on May 19, 2002 East Timor became an independent country, after 450 years of Portuguese rule, 24 of brutal Indonesian occupation and two-and-a-half under the supervision of the UN. East Timor became a member of the United Nations in Sept. 2002.

Economy: East Timor's economy is dominated by agriculture with 75% of the country's population engaging in this activity. The major agricultural products are sweet potatoes and corn along with cash crops – especially coffee. Farmers on the coastal plains also grow rice and plantation crops such as rubber, tobacco, and coconuts. In addition, the forests yield many kinds of timber, including sandal wood.

Most of the people of Timor are of mixed Malay, Polynesia and Papuan descent. Members of a small ethnic community play an important role in the island's commerce.

53. Ecuador

(Republic of Ecuador) Republica del Ecuador



Capital: Quito; **Other Large Cities:** Guayaquil, Cuenca; **Area:** 283,561 sq km; **Population:** 13,547,510; **Languages:** Spanish, Quechuan and tribal dialects; **Religion:** Roman Catholic-95%; **Literacy:** 97.5%; **Life Expectancy:** 76.42; **Currency:** L

\$1=1); p.c.i: \$ 4,300; Date of Independence: 24th May, 1822

Government Type: Republic; Head of State & Govt (President): Alfredo Palacio.

History: Ecuador lies on the west coast of South America. A part of the great Inca Empire, Ecuador came under Spanish rule in 1533. It became independent in 1830.

Some 40% of the population is Amerindian. Guayaquil is the chief seaport and airport. The Galapagos islands (the home of huge tortoises) belong to Ecuador.

Economy: Ecuador is the world's largest exporter of bananas. Sugarcane, African palm, cacao, balsawood (world's largest exporter), rice and coffee are grown.

In Mar.-April '94, Ecuador and Peru fought a month-long war over a disputed border area. The Andean nations had fought wars in 1941 and 1981, over 78 km. of unmarked border amid a mountainous jungle. In Aug. '98, Peru charged Ecuadorean troops had entered its territory.

Industry: Food processing, wood products, textiles, sugar. Silver ore is now the chief mineral product. There are large deposits of copper, gold and zinc. The production of petroleum is increasing. The so-called 'Panama' hats made of Tequila straw are made in Ecuador.

In Feb. '99, the currency was devalued, following the worst economic crisis in 70 years. The economy had been ravaged by high interest rates, plunging oil prices and El Nino-related storms and flooding.

Recent Events: In March 2006, nationwide protests flared over a proposed free trade agreement with the US.

54. Egypt

(Arab Republic of Egypt) Jumhuriyah Misr al-Arabiya

Capital: Cairo; **Other Large Cities:** Alexandria, Jiza; **Area:** 997,677 sq.km; **Population:**



78,887,007; **Languages:** Arabic, English; **Religions:** Muslim (mostly Sunni)-90%, Coptic-9%, Other Christian-1%; **Literacy:** 57.7%; **Life Expectancy:** 71.291; **Currency:** Egyptian Pound (\$1=6.757); p.c.i: \$ 3,900; **Date of Independence:** 28th February, 1922.

Government Type: Republic; **President:** Hosni Mubarak; **PM:** Ahmed Nazif.

Egypt, traditionally known as the Gift of the Nile, occupies north east Africa.

History: Egypt has one of the oldest civilisations in the world, its recorded history going back to more than 5000 B.C. In 1922 Egypt became an independent monarchy and in 1953 a republic. Egypt merged with Syria in 1958 to form United Arab Republic; Syria broke away from the union in 1961.

The Suez Canal (173 km. long, connecting the Mediterranean with the Red Sea) was opened for navigation in 1869; nationalised 1956, closed 1967, reopened 1975. The Aswan High Dam (1971) provides irrigation for more than a million acres of land.

Economy: The main agricultural area is Lower Egypt which covers the delta of the Nile. Crops are cotton, onions, wheat, maize, millet, rice, sugarcane and fruits of various kinds. **Industry:** Textiles, chemicals, petrochemicals, food processing, cement. **Exports** are cotton, rice, mineral products, textiles, refrigerators, tyres, cement and electrical instruments.

The population boom is causing concern. Islamic militancy is a new threat in Egypt.

Recent Events: In February 2006, up to

1,000 people died when a ferry carrying about 1,400 passengers from Saudi Arabia to Egypt sank in the Red Sea. In April, bomb attacks in the Red Sea resort of Dahab killed more than 20 people.

Mission In India: Embassy of the Arab Republic of Egypt, 1/50-M, Niti Marg, Chanakyapuri, New Delhi-110021. Tel: 26114096/97; Fax: 91-11-26885355.

Indian Mission in Egypt: Embassy of India, 5 Aziz Abaza Street, Zamalek, P.O. Box No.718, Cairo 11511, Egypt. Tel: 00-20-2-7360052, 7356053; Fax: 00-20-2-7364038.

E-mail:embassy@india-emb.org.eg

55. El Salvador

(Republic of El Salvador) Republica do El Salvador



Capital: San Salvador ; **Other Large Cities:** Santa Ana, San Maguel ; **Area:** 21,393 sq.km; **Population:** 6,822,378; **Languages:** Spanish; **Religions:** Roman Catholic-83%; **Literacy:** 80.2%; **Life Expectancy:** 71.49; **Currency:** Colon (\$1 = 8.75); **p.c.i:** \$ 4,700; **Date of Independence:** 15th September, 1821.

Government Type: Republic; **Head of State & Govt (President):** Elias Antonio Saca Gonzalez.

History: El Salvador in Central America became independent of Spain in 1821 and of the Central American Federation in 1839. It is the smallest and the most densely populated of the Central American States

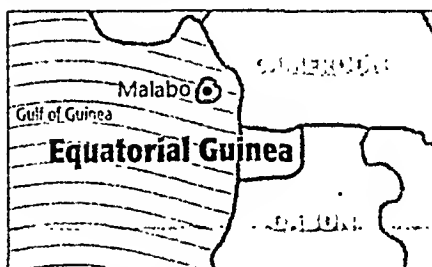
and the only one without an Atlantic coast line.

Economy: The country is predominantly agricultural. The principal crop is coffee which accounts for one half of exports. Other products are cotton, maize and sugar. Fisheries are being developed and figure prominently in the export list. **Industry:** Food & beverages, textiles, petroleum products.

A 12-year civil war that killed 75,000 people ended in 1992. In 1998 Hurricane Mitch killed 200 and made 30,000 homeless. In 2001, earthquakes and drought caused heavy damage.

56. Equatorial Guinea

(Republic of Equatorial Guinea) Republica de Guinea Ecuatorial



Capital: Malabo ; **Other Large Cities:** Bata **Area:** 28,051 sq.km; **Population:** 540,109; **Languages:** Spanish, Fang, Bubi and pidgin English; **Religions:** Nominally Christian and predominantly Roman Catholic, pagan practices; **Literacy:** 85.7%; **Life Expectancy:** 49.54; **Currency:** CFA Franc (\$1 = 618.98); **p.c.i:** \$ 50,200 ; **Date of Independence:** 12th October, 1968.

Government Type: Republic; **President:** Brig-Gen. Teodoro Obiang Nguema Mbasogo; **PM:** Miguel Abia Biteo Borico.

History: Equatorial Guinea, formerly Spanish Guinea, comprises the islands of Fernand Po (now Bioko), Corcisco, Gre, Elobey, and Annoban and the

ritory of Rio Muni on the west coast of Africa. In 1975, almost all place names were changed by President Macias Nguema. The capital Santa Isabel thus became Malabo. Macias Nguema was ousted by his nephew, Mbasogo on Sept. 29, 1979. Constitutional rule was resumed in 1982.

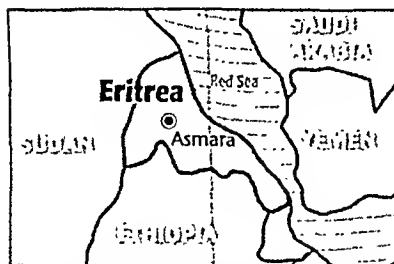
Economy: The island of Fernando Po is mostly mountainous. Coffee is cultivated upto 900 m and cocoa upto 600 m unit. There are also forests of ebony, mahogany and oak. Other products are cocoa, coffee, timber, palm oil and bananas. The country is heavily dependent on foreign aid.

Recent Events: There was coup attempt in Aug. '04. Mark Thatcher was arrested for alleged involvement.

Mission In India: Embassy of the Republic of Equatorial Guinea stationed at Beijing.

57. Eritrea

(State of Eritrea)



Capital: Asmara; **Other Large Cities:** The Ports of Massawa and Assab; **Area:** 117,600 sq. km; **Population:** 4,786,994; **Languages:** Tigrinya Arabic and several other local languages; **Religions:** Muslim, Coptic Christian, Roman Catholic, Protestant; **Literacy:** 58.6%; **Life Expectancy:** 59.03; **Currency:** Nakfa (\$1=13.60); **p.c.i:** \$ 1,000; **Date of Independence:** 24th May, 1993.

Government Type: Transitional Government; **Head of State & Govt (President):** Issaias Afworki.

History: Eritrea, until recently the northernmost province of Ethiopia, is situated on the African shore of the Red Sea. In 1890, it became an Italian colony but Italy lost the colony to a British invasion force in 1941. After World War II, a U.N. resolution made Eritrea an autonomous, self-governing region of Ethiopia apparently against the wishes of most of Eritrea's population. In 1962 Ethiopian emperor Haile Selassie formally annexed Eritrea. Beginning in the mid-60's the province was repeatedly torn by fighting between the Eritrean Liberation Front (ELF) and other groups like Eritrean People's Liberation Front (EPLF) advocating secession from Ethiopia, and the Ethiopian army. Africa's longest civil war of 31 years ended in 1993 and on May 24 Eritrea became an Independent nation-Africa's 52nd. It was admitted to the Organisation of African Unity and the United Nations.

Border clashes between Eritrea and Ethiopia in May-June '98 led to the death of hundreds and an end to the very cordial relations between the two neighbours. Fighting resumed in 1999. In May, 2000, Eritrea announced withdrawal of troops from disputed border territory. In 2002, an international commission gave a ruling on the border but the tensions continued.

There are nine ethnic groups in Eritrea. Massawa is the chief port. Only 5% of the land is under cultivation. Nearly a million Eritreans lived abroad in 1995.

Economy: Agriculture: Sorghum, livestock including camels and goats, Red Sea fishing. Minerals: Gold, copper, potash, iron ore. Exports: Hides, salt, cement, gum arabic.

Mission In India: Hon. Consulate of Eritrea: B-8/14, Vasant Vihar, New Delhi-110 057. Tel: 26140830; Telefax: 91-11-26141067.

58. Estonia

(Republic of Estonia)/Esti Vabariik

Capital: Tallinn; **Other Large Cities:** Tartu, Kohtla-Järve; **Area:** 45,100 sq.km; **Popula-**



tion: 1,324,333; Languages: Estonian; Religions: Evangelical Lutheran, Russian Orthodox, Estonian Orthodox, Baptist, Methodist, Seventh-Day Adventist, Roman Catholic, Pentecostal, Word of Life, Jewish; Literacy: 99.8%; Life Expectancy: 72.04; Currency: Kroon (\$1 = 12.379); p.c.i: \$ 16,700; Date of Independence: 20th August, 1991.

Government Type: Parliamentary Republic;
Head of State: Arnold Ruutel; **PM:** Andrus Ansip.

History: Estonia seceded from Soviet Union and attained Independence in August, 1991, 50 years after the three Baltic states were annexed by Stalin's USSR. The first free elections in over 50 years were held in Sept. '92. Estonia is bounded west and north by the Baltic, east by Russia and south by Latvia.

Economy: Agriculture and dairy farming are the major occupations. Some 22% of the territory is covered by forests, which provide fuel and raw material for Industries. Agricultural products: Grain, potatoes, vegetables, dairy products. Natural resources: Shale deposits, timber, peat, phosphorites. Industry: Ship-building, furniture, match & pulp, leather, garments, agricultural machinery, electric motors.

Recent Events: Estonia joined EU in 2004.

Mission in India: Honorary Consulate General of the Republic of Estonia, A-11, Kailash Colony, First Floor, New Delhi-110 048; Tel: 26449808; Fax: 256484575.

59. Ethiopia

(Federal Democratic Republic of Ethiopia)/Ye Etiyop'ya Hezbawi Dimokrasiyawi Republic

Capital: Addis Ababa; **Other Large Cities:** Gondar, Dire Dawa; **Area:** 1,221,900 sq.km; **Population:** 74,777,981; **Languages:** Amharic, Oromigna, Tigrigna and 60 other small languages; **Religions:** Muslim-45%-50 %, Ethiopian Orthodox-35%-40%, Animist 12%, others-3-8%; **Literacy:** 42.7%; **Life Expectancy:** 49.03; **Currency:** Birr (\$1=8.737); **p.c.i:** \$900.



Government Type: Federal Republic; **President:** Girma Woldegiorgis; **PM:** Meles Zenawi.

History: Black Africa's oldest state formerly known as Abyssinia. A mountainous country in north-east Africa, it has a colourful history. The Ethiopian emperors claimed descent from King Solomon and the famous Queen of Sheba. The last Emperor of Ethiopia Haile Sellasie I was deposed by armed marxist forces which took over the govt. in 1974. Opposition to this government mounted in 1991 and marxist leader Mengistu Haile Mariam had to flee the country. A new government consisting of various groups was formed by the Ethiopian Revolutionary Democratic Front, an umbrella group of six rebel armies. Eritrea, a province on the Red Sea, declared its independence in 1993.

May, 1995 saw the birth of a new Federal Democratic Republic of Ethiopia after four years of transitional rule. The new constitution divides Ethiopia into nine ethnically distinct regions, which have the right through a popular referendum

There was an undeclared war between Ethiopia and Eritrea (May-June, 1998) over an area on the border between the two. Efforts by OAU didn't yield much. Fighting resumed in 1999 and 2000. Thousands died on both sides. In Dec. the two countries formally ended the war, with an accord signed in Algiers, but tensions continued.

Economy: Ethiopia's economy is based on agriculture, which accounts for half of GDP, 85% of exports, and 80% of total employment. The agricultural sector suffers from frequent drought and poor cultivation practices; and as many as 4.6 million people need food assistance annually. Coffee is the most important export. Other important exports include qat, live animals, hides, and gold.

Recent Events: In May, 2006, six political parties and armed groups formed an opposition alliance, the Alliance for Freedom and Democracy, at a meeting in the Netherlands. Several bomb blasts hit Addis Ababa.

Mission In India: Embassy of the Federal Democratic Republic of Ethiopia, 7/50-G, Satya Marg, Chanakyapuri, New Delhi-110021. Tel: 26119513, 26119514; Fax: 26875731.

E-mail: delethem@yahoo.com

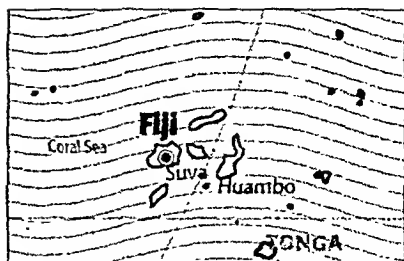
Indian Mission In Ethiopia: Embassy of India, Kabena (Aware District) W-13, K-15, H.No. 224, Post Box 528, Addis Ababa, Ethiopia. Tel: 00-251-1-552100, 550694, 556610, 556611; Fax: 00-251-1-552521, 552305.

E-mail: indembassy@telecom.net.et

60. Fiji

(Republic of the Fiji Islands)

Capital: Suva; **Other Large Cities:** Lautoka, Nadi; **Area:** 18,376 sq.km; **Population:** 905,949; **Languages:** English, Fijian and Hindi; **Religions:** Christian-52% (Methodist-37%, Roman Catholic-9%), Hindu-38%, Muslim-8%, others-2%; **Literacy:** 93.7%; **Life Expectancy:** 69.82; **Currency:** Dollar (\$1



=1.75); p.c.i: \$ 6,000 ; **Date of Independence:** 10th October, 1970.

Government Type: Republic; **President:** Ratu Josefa Iloilo Vatu; **PM:** Laisenia Qarase.

Fiji consists of 332 islands and islets in western S. Pacific, lying 1750 km. north of New Zealand. The largest of the islands Viti Levu constituting more than half of the total land area of Fiji islands is the seat of the government. Fiji lies on the main route between Australia, New Zealand and North America and is the centre of communications in the South West Pacific.

History: These islands came under British rule in 1874. From 1879, indentured Indian labour was imported into the islands to work on European sugar plantations. Practically all the Indian workers settled permanently in the islands. Their descendants now form about half of the population. Melanesians, the original inhabitants, make up 43 per cent, the rest being made up of Europeans, Chinese and others. On Oct. 10, 1970 Britain granted independence to Fiji.

Economy: Fiji is a famous tourist centre with 3,00,000 to 4,00,000 tourists annually. Its major products are agricultural. Sugar and coconuts form 90 per cent of the total exports. Rice and ginger are grown too. Mining is limited and industries are (sugar refining, light industry and tourism) growing. Gold is mined on Viti Levu, and is another major export.

In October 1987 military strongman Col. Sitiveni Rabuka declared Fiji a republic defying

ing popularly elected government headed by Dr. Thimoci Bavadra, leader of the majority Indian ethnic group. A civilian government was restored to power in December.

A new constitution favouring indigenous Fijians was issued in July, 1990. In the 70-member Parliament, there were 27 seats for Indians. The posts of President and PM were reserved for indigenous Fijians.

Labour Party leader Mahendra Chaudhry, the first ethnic Indian to hold the post, became PM in June '99.

On May 19, 2000 George Speight, a local businessman, took most of the cabinet hostage. He favoured dominance of indigenous Fijians. Two months of political unrest ended in July with the formation of a new government. Speight was imprisoned. The deposed PM Chaudhry was freed in July after 55 days of captivity. Indians were offered 14 cabinet posts in 2003.

Recent Events: In March 2006, Great Council of Chiefs elected incumbent president Iloilo to a second, five-year term. In May, former PM Sitiveni Rabuka was charged with orchestrating a failed army mutiny in November 2000. Ruling party leader and incumbent Prime Minister Lae Senia Qarase narrowly won elections and was sworn in for a second term.

Indian Mission in Fiji: High Commission of India, Level 7, LIC Building, Butt. Street, P.O. Box 471, Suva, Fiji Islands. Tel: 00-679-301125; Fax: 00-679-301032.

E-mail: hicomindsuva@is.com.fj

61. Finland

(Republic of Finland)/Suomen Tasavalta
Capital: Helsinki; **Other Large Cities:** Tampere, Espoo; **Area:** 338,000 sq.km.; **Population:** 5,231,372; **Languages:** Finnish and Swedish; **Religions:** Lutheran National Church-84.2%, Greek Orthodox in Finland-1.1%, other Christian-1.1%, others-0.1%, None-13.5%; **Lit-**



eracy: 100%; **Life Expectancy:** 78.5; **Currency:** Euro (\$1= 0.79); **p.c.i:** \$ 30,900; **Date of Independence:** 6th December, 1917.

Government Type: Republic; **President:** Ms. Tarja Halonen; **PM:** Matti Vanhanen.

History: The Republic of Finland is a Baltic State, which once formed part of the Russian Empire. It became independent on Dec. 6, 1917 and a republic in 1919.

Off the south-west coast are the Swedish-populated, autonomous Åland islands, controlling the entrance to the Gulf of Bothnia. Finland has more than 20,000 lakes. 62% of the population live in urban areas.

Economy: The most important rural activity is forestry. Finland's vast forests of pine, spruce, and birch support a number of major industries. The extensive pulp and paper sector is responsible for around one-quarter of world paper exports. Other industries are shipbuilding, metals, machinery, textiles, leather and chemicals. Finland was among the first countries to deregulate its telecommunications industry and is now the world's most connected country. Finland now has the highest per capita number of internet connections. Finland has a fairly big fleet of merchant marine. Chief agricultural crops are grains, potatoes and dairy products. With the help of investments in export industries and hi-tech, exports as a share of GDP have risen to 40% in the ten years to joined the EU on Jan. 1, 1995

Mission in India: Embassy

Nyaya Marg, Chanakyapuri, New Delhi - 110021. Tel: 51497500; Fax: 51497555

E-mail: sanomat.nde@formin.fi

Consulate: Mumbai, Tel: 22165277, Fax: 22164213,

E-mail: ram tarneja@bsbmumbai.org;

Calcutta: Tel: 22474328, 2247 1950, Fax: 22474329.

E-mail: mpc@cal.vsnl.net.in; Chennai: Tel: 28524141, Fax: 28521253.

E-mail: siva holdings@vsnl.net

Indian Mission in Finland: Embassy of India, Satamakatu 2 A 8, 00160, Helsinki, Finland. Tel: 00-358-9-608927, 608935; Fax: 00-358-9-6221208.

62. France

(French Republic)/Republique Francaise



Capital: Paris; Other Large Cities: Marseilles, Lyons, Strasbourg; Area: 543,965 sq.km; Population: 60,876,136; Languages: French and regional dialects; Religions: Roman Catholic-83%-88%, Protestant-2%, Jewish 1%, Muslim-5%-10%, Unaffiliated-4%; Literacy: 99%; Life Expectancy: 79.73; Currency: Euro (\$1=0.79); p.c.i: \$ 29,900; Date of Independence: 486 (Unification by Clovis).

Government Type: Republic; President: Jacques Chirac. PM: Dominique de Villepin.

History: France, the largest country in western Europe, lies between three big nations—Spain, Germany and Italy. The island of Corsica—the birthplace of Napoleon—forms an

integral part of France. The French Revolution (1789-1793) made France, once a monarchy, a republic. Since then republic and imperial forms of government follow one after another until the Fifth Republic. The French Community came into being in 1958 under President Charles de Gaulle. France is a member of the European Union.

Economy: The country is the largest food producer and exporter in Western Europe. Main crops: Grains, maize, rice, fruits, vegetables, wine, potatoes, livestock and dairy products. Among manufactured products, the most important are chemicals, silk, cotton textiles, tiles, automobiles, aircraft, ships, precision instruments, electronic equipment, perfume and wines. Over the last 20 years urban development and technological progress has changed the people's everyday life profoundly. Life expectancy: Male 75, Female: 83.

France is the world's fourth-largest industrial power and has many globally important companies. Danone, for example, is the world's largest dairy products firm, and two major car companies, Peugeot-Citroen and Renault, account for one-eighth of France's exports. Another distinctive export has been the high-speed train, the TGV.

France exploded a nuclear device at Mururoa atoll (First tests in 1966) on September 1995. In January 96, France announced the end of the series of tests.

Violence by Corsican separatists has been a worrying successive governments for a quarter century.

France which had 75.5 m. foreign visitors in 2000, reinforced its position as the world's most visited country. The Eiffel Tower, France's most visited monument, has 15,000 tourists daily.

Overseas Departments: French Guiana, Guadeloupe, Martinique, Reunion.

Overseas Territories: French Polynesia, French Southern and Antarctic Lands, New Caledonia and dependencies, Wallis and Futuna Islands. Overseas departments elec

representatives to the National Assembly and the administrative organisation of mainland France applies to them. The administrative organisation of overseas territories includes a locally elected government.

Territorial collectivities: St. Pierre and Miquelon; Mayotte.

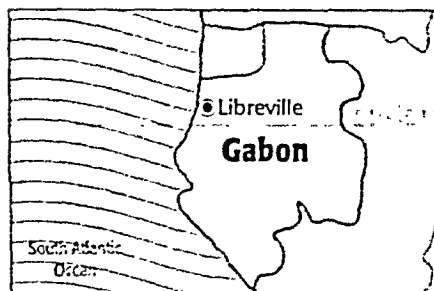
Recent Events: In March-April 2006, new youth employment laws sparked mass demonstrations in Paris and other cities across France. As protest continued, the legislation was scrapped. In June, Upper house of parliament passed a bill setting tough new restrictions on immigration. The rules made it harder for low-skilled migrants to settle. France were the runner-up in the 2006 FIFA World Cup Soccer tournament. In the 110th minute of the World Cup final against Italy, French player Zidane was sent off for headbutting Marco Materazzi in the chest in an off-the-ball incident after the two players had exchanged words. Despite the subsequent controversy over his offence in the final, Zidane was awarded the Golden Ball as best player in the 2006 World Cup.

Mission in India: Embassy of France, 2/50-E, Shantipath, Chanakyapuri, New Delhi-110021. Tel: 26118790; Fax: 2687 2305.

Consulate General of France: Hoechst House, 7th Floor, Nariman Point (next to NCPA), Mumbai-400 021. Ph: 0091-22-56694000; Web: www.consulfrance-bombay.org.

Indian Mission in France: Embassy of India, 15, Rue Alfred Dehodencq, 75016 Paris, France. Tel: 00-33-1-40507070, 45243340; Fax: 00-33-1-40500996.

E-mail: ambassador2@wanadoo.fr



lects; Religions: Christian-55%-75%, Animist, Muslim less than 1%; **Literacy:** 63.2%; **Life Expectancy:** 54.49; **Currency:** CFA Franc (\$1 = 518.98); **p.c.i:** \$6,800; **Date of Independence:** 17th August, 1960.

Government Type: Republic; **President:** Omar Bongo; **PM:** Jean Eyeghe Ndong.

History: The Gabon Republic is situated on the western coast of central Africa. Formerly a province of French Equatorial Africa, Gabon attained independence on Aug. 17, 1960.

Economy: Gabon is one of the most prosperous black African countries. Most of the country is covered by a dense tropical forest. Chief crops are cocoa, coffee, rice, peanuts, sugarcane. The economy, traditionally dependent on forestry, is now dominated by mining. The manganese deposit at Moanda in the south is one of the world's richest deposits. Crude oil production is already the fifth highest in Africa. Uranium, gold and iron ore are also mined. **Industry:** Processing of food, timber and textiles

Recent Events: • President Omar Bongo who has ruled Gabon for 35 years, has secured a constitutional change that could allow him to be in power indefinitely.

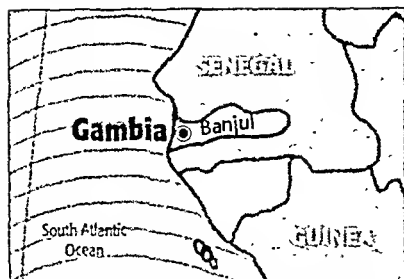
Mission in India: Embassy of Gabon stationed at Tokyo

63. Gabon

(Gabonese Republic) Republique Gabonaise
Capital: Libreville; **Other Large Cities :** Port-Gentil, Masuku; **Area:** 267,667; **Population:** 1,424,906; **Languages:** French and Bantu dia-

64. The Gam

(Republic of The Ga
Capital: Banjul; (Serrekunda, Farafeni



Population: 1,641,564; Languages: English and Mandinka, Wolof; Religions: Muslim-90%, Christian-9%, Indigenous beliefs-1; Literacy: 40.1%; Life Expectancy: 54.14; Currency: Dalasi (\$1=28.3); p.c.i: \$ 1,900; Date of Independence: 18th February, 1965

Government Type: Republic; Head of State & Govt: Lt. Yahya Jammeh.

The Gambia, the smallest African country, is a narrow strip of land in West Africa, extending inland from the Atlantic Ocean for about 30 miles on either side of the Gambia River and surrounded on three sides by Senegal. Nearly half the inhabitants belong to the Mandingo tribe.

History: Formerly a British colony and protectorate, the Gambia became an independent state within the Commonwealth on Feb. 18, 1965 and a Republic in April 1970.

After a coup attempt in 1981, the Gambia formed the confederation of Senegambia with Senegal. This lasted until 1989.

In July, '94, a military coup ousted President Dawda Jawara, who was in power for 24 years. In Aug. '96, voters approved a constitution paving the way for a return to democracy. The 2-year-old ban on political parties was lifted.

Economy: Peanuts are the main crop, along with rice and palm kernels. Textiles, food and manufactured goods are significant items of import. Tourism is the biggest foreign exchange earner.

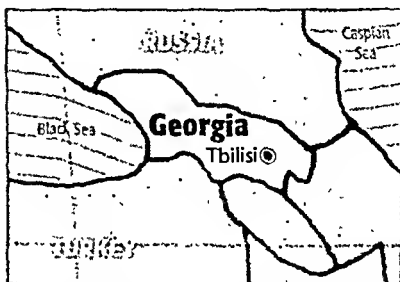
Mission in India: Honorary Consulate General of the Republic of Gambia, B-11, May

Fair Gardens, New Delhi-110 016; Tel: 26860285; Fax: 91-24532503.

E-mail: kvachani@hotmail.com

65. Georgia

(Republic of Georgia)/Sakartvelos Respublika
Capital: Tbilisi (Tiflis); Other Large Cities: Kutaisi, Batumi; Area: 69,700 sq.km; Popula-



tion: 4,661,473; Languages: Georgian, Russian; Religions: Georgian orthodox-65%, Muslim-11%, Russian Orthodox-10%, Armenian Apostolic-8%, Unknown-6%; Literacy: 100%; Life Expectancy: 76.09; Currency: The Lari (\$1=1.77); p.c.i: \$3,300; Date of Independence: 9th April, 1991

Government Type: Republic; President: Mikhail Saakashvili; PM: Zurab Noghaideli.

History: Georgia, a former Soviet republic that became independent in Dec., 1991, is bordered by the Black Sea, Turkey, Armenia and Azerbaijan.

Georgia has a fine climate and is known for its natural wealth, variety and beauty. It has the largest manganese mines in the world.

Georgia includes the Autonomous Republics of Abkhazia and Adjara and the former Autonomous Region of South Ossetia.

Economy: Agriculture: Tea, citrus fruits, grapes, grain, vegetables, potatoes; silk, tobacco, bamboo, eucalyptus. Natural resources: Manganese, coal, baryta, oil, marble, iron. Industry: Food processing, tea, brew-

ery, textile, chemical fibres, paper and metallurgy.

Georgia was admitted to the UN as the 179th member in July, 1992 – the last of the former Soviet republics to join the world organisation. It joined the Commonwealth of Independent States (CIS) early 1994. In Feb. '94, Georgia signed agreements with Russia for economic and military cooperation. Fighting between government forces and Abkhazian separatists was intense in 1993. In May '94, ceasefire agreement was signed.

Mission in India: Honorary Consulate of Georgia, 19 DDA, Community Centre, Zamrudpur, Kailash colony Ext., New Delhi-110 048; Tel: 26431015; Fax: 26447864.

E-mail: georgiaconsulate@rediffmail.com

66. Germany

(Federal Republic of Germany) Bundesrepublik Deutschland



Capital: Berlin; **Other Large Cities :** Hamburg, Munich, Cologne, Frankfurt, Leipzig; **Area:** 357,020 sq.km.; **Population:** 82,422,299; **Languages:** German; **Religions:** Protestant-34%, Roman Catholic-34%, Muslim-3.7%, unaffiliated or others-28.3%; **Literacy:** 99%; **Life Expectancy:** 78.8; **Currency:** Euro (\$1=0.79); **p.c.i:** \$ 30,400; **Date of Independence:** 3rd October, 1990 (date of unification of West Germany and East Germany)

Government Type: Federal Republic; Presi-

dent: Horst Koehler; Head of Govt: Chancellor Angela Merkel.

The Federal Republic of Germany in Central Europe (United Germany of East and West) covers an area of 357,020 sq km made up of mountain areas, uplands and plains. To the north the country is bounded by the North Sea and the Baltic, to the south by the Alps, Lake Constance and the Rhine, which also forms the border in the south-west. The main rivers are the Rhine, the Danube, the Elbe, the Weser and the Moselle. The highest mountain is the Zugspitze (2,963 m.) in the Alps. The uplands rise to 1,500 m.

History: Germany since 1871 had been a nation united in one country of numerous states which had a common language and traditions. Since World War II, until 1990, it had been split in two parts: Federal Republic of Germany (West Germany) and German Democratic Republic (East Germany). The merger of the two Germanys took place on Oct. 3, 1990 and the first all-German elections since 1937 were held on Dec. 2, 1990.

Germany is a democratic, parliamentary state with a federal constitution. The Federal Republic is made up of 16 Lander (States). The Bundestag (Federal Diet) is the supreme legislative body. With the addition of 144 members of the East German Volkskammer, the total membership rose to 663 in 1990.

Economy: Of the land 48% is used for agriculture and 29% is wooded. Chief crops: Grains, potatoes, sugar beets. Major mineral resources: Lignite, coal, iron and copper ores and potash. Industry: Steel, ships, chemicals, machinery, coal and chemicals.

Germany has one of the most generous welfare systems with high unemployment benefits and pensions. This comes as a result since total deductions shared between employers and workers now amount to more than 40% of pay going to meet these costs, which is increasing at

costs are one-third higher than in the USA or the UK. Another notable feature of the German economy and society is a concern for the environment. The country has intensive systems of recycling—around 7,00,000 jobs are linked with environmental protection.

As Europe's largest economy and most populous nation, Germany remains a key member of the continent's economic, political, and defence organisations. In January 2002, Germany and 11 other EU countries introduced a common European currency, the euro. Germany's 7.3 m. legal foreign workers account for about 9 per cent of the population. Germany's ageing population, combined with high unemployment, has pushed social security outlays to a level exceeding contributions from workers.

Recent Events: In July 2006, Parliament approved far-reaching changes to the way in which Germany was governed; the reforms were intended to speed up decision-making. Germany hosted the 2006 FIFA World Cup soccer tournament.

Mission in India: Embassy of the Federal Republic of Germany, No.6/50-G, Chanakya-puri, New Delhi-110 021. Tel: 26871831, Telefax: 26873117.

E-mail:germany@del3.vsnl.net.in germany@vsnl.com

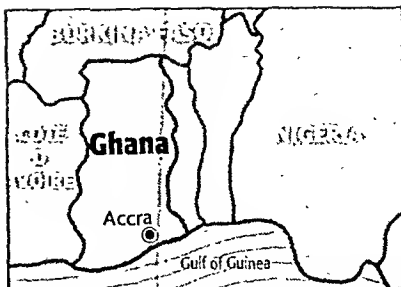
Indian Mission in Germany: Embassy of India, Tiergartenstrasse 17, 10785 Berlin, Germany. Tel:00-49-30-257950, 25705001 (After Office Hour) Fax:00-49-30-25795102 (Chancery).

E-mail:chancery@indiaembassy.de

67. Ghana

(Republic of Ghana)

Capital: Accra; **Other Large Cities :** Kumasi, Takoradi; **Area:** 238,537 sq. km; **Population:** 22,409,572; **Languages:** English (official language) and eight major national languages; **Religions:** Christian-63%, Muslim-16%, indig-



enous beliefs-21%; **Literacy:** 74.8%; **Life Expectancy:** 58.87; **Currency:** Cedi (\$1=9142); **p.c.i.:** \$ 2,500; **Date of Independence:** 6th March, 1957.

Government Type: Republic; **President (Head of State & Govt):** John Kufour; **Vice President:** Alhaji Aliu Mahama.

A country tucked between Togo and Cote D'Ivoire on the southern coast of West Africa, Ghana is composed of the former British colony Gold Coast and the British-ruled Togoland.

History: Independence came on March 6, 1957. Republic status within the Commonwealth was attained on July 1, 1960. Dr. Kwame Nkrumah was the first President. Coups occurred in 1966, 1972, 1978, 1979 and 1981. A new pluralistic democratic constitution was approved in 1992.

Economy: Ghana is primarily an agricultural country which held position as world's leading producer of cocoa for long. Other crops: kolanuts, palm products, bananas, coffee, maize and rubber. **Exports:** Timber, gold, diamonds, manganese, bauxite and cocoa. **Industry:** Aluminium and light industry.

Recent Events : John Kufuor (in power since 2001) is the first democratically elected president since independence. Falling prices of cocoa and rising cost of imported oil have hit Ghanaian economy hard.

Mission in India: Ghana High Commission, 50-N, Satya Marg, Chanakya-puri, New Delhi-110021. Tel: 26883315, 26883298, 26883338; Telefax: 26883202.

E-mail: ghstarin@vsnl.net

Indian Mission In Ghana: High Commission of India, No.9, Ridge Road, Roman Ridge, P.O. Box CT-5708, Accra, Ghana. Tel: 00-233-21-775601, 775602; Fax: 00-233-21-772176.

E-mail: indiahc@ncs.com.gh

68. Greece

(Hellenic Republic) Elliniki Dimokratia



Capital: Athens; **Other Large Cities :** Thessaloniki, Salonika, Larissa; **Area:** 131,990 sq.km; **Population:** 10,688,058; **Languages:** Greek; **Religions:** Greek Orthodox (Christian)-98%, Muslim-1.3%, others-0.7%; **Literacy:** 97.5%; **Life Expectancy:** 79.24; **Currency:** Euro (\$1= 0.79); **p.c.i:** \$ 22,200 ; **Date of independence:** 1829.

Government Type: Parliamentary Republic; **President:** Karolos Papoulias; **PM:** Konstandinos Karamanlis.

History: Greece or the Hellenic Republic, on the southern end of the Balkan Peninsula in south-east Europe. Ancient Greece's achievements in art, architecture, science, mathematics, philosophy, drama, literature and democracy were unparalleled. The country reached the peak of its glory in the 5th century B.C.

Politically independent till the 1st century B.C., the Greeks succumbed to Roman might in the latter half of that century. Later they came under Byzantine and Ottoman empires. In 1830, Greece regained its freedom as a

monarchic state. After many vicissitudes of fortune, monarchy was abolished in 1974, since then Greece has been a republic. Greece is a member of the European Union.

Numerous islands constitute about one-fifth of total area, of which the largest is Crete.

Tensions between Greece and the Former Yugoslav Republic of Macedonia eased in Sept. 1995 with their agreeing to normalise relations.

Economy: Greece, though till recently an agricultural country, has now developed industrially. In merchant shipping, Greece owns a surprisingly big tonnage. Tourism is Greece's biggest industry. Others: Textiles, chemicals, metals, wine, food processing, cement. Chief crops: Wheat, sugar beet, grapes, other fruits, milk, olive oil, cotton.

Recent Events: In March 2006, public sector workers staged 24-hour strike in support of demand for pay increase and in protest at government plans to scrap job security laws and intensify privatisation programme. In May, Greek and Turkish fighter planes crashed into Aegean after colliding in mid-air.

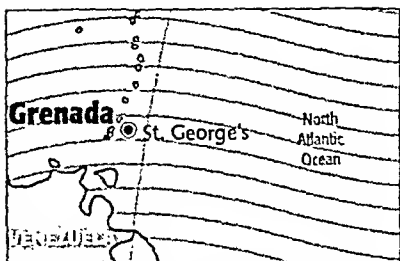
Mission In India: Embassy of Greece, EP-32, Dr.S.Radhakrishnan Marg, Chanakyapuri, New Delhi-110021. Tel: 26880700, Telefax: 26888010; E-mail: hellembo@eth.net; Web : www.greeceinindia.com

Indian Mission In Greece: Embassy of India, 3, Kleanthous Street, 10674 Athens, Greece. Tel: 00-30-1-7216227, 7216481, Fax: 00-30-1-7211252.

E-mail: indembassy@ath.forthnet.gr

69. Grenada

Capital: St. George's; **Area:** 344 sq.km; **Population:** 89,703; **Languages:** English and French-African patois; **Religions:** Roman Catholic-53%, Anglican-13.8%, Protestant-33.2%; **Literacy:** 96%; **Life Expectancy:** ; **Currency:** East Caribbean Dollar (p.c.i: \$ 5,000; **Date of Independence:** February, 1974



Government Type: Parliamentary Democracy; **Gov.Gen.:** Daniel Williams; **PM:** Keith Mitchell.

History: Grenada is an island country in the West Indies. It is the most southerly island of the Windward Islands chain and includes Southern Grenadines (islands), the largest of which is Carriacou. Grenada became independent in 1974.

The population is of mixed origin: European, Negro and Carib Indians.

Economy: Tourism is a growing industry (380,000 visitors in 1998-99) but agriculture dominates the economy. Grenada is known as the 'Spice Island' and is the world leader in the production of nutmeg and mace. Other major agricultural products are cocoa, bananas and tropical fruit and vegetables.

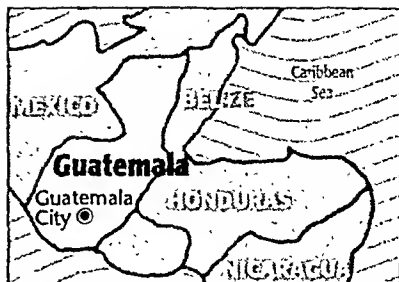
Mission In India: Honorary Consulate of Grenada, 12, Sunder Nagar, New Delhi-110 003. Tel: 24354512; Fax: 23328307.

E-mail: skkandhari@vsnl.net

70. Guatemala

(Republic of Guatemala) Republica de Guatemala

Capital: Guatemala City; **Other Large Cities:** Escuintla, Puerto Barrios; **Area:** 108,889 sq.km; **Population:** 12,293,545; **Languages:** Spanish and Indian dialects; **Religions:** Roman Catholic, Protestant, Indigenous Mayan beliefs; **Literacy:** 70.6%; **Life Expectancy:** 69.38; **Currency:** Quetzal (\$1=7.62); **p.c.i:** \$ 4,700; **Date of Independence:** 15th September, 1821.



Government Type: Republic; **President:** Oscar Jose Rafael Bertger Perdomo.

History: Guatemala, a republic, is the northernmost and the third largest of the five central American states and has the largest population. Fifty per cent of the population is of Indian (Red) origin, 45 per cent Ladino or of mixed European and Indian parentage. The Indians are the descendants of the builders of the great Maya civilisation which was wiped out by the Spanish conquistadors.

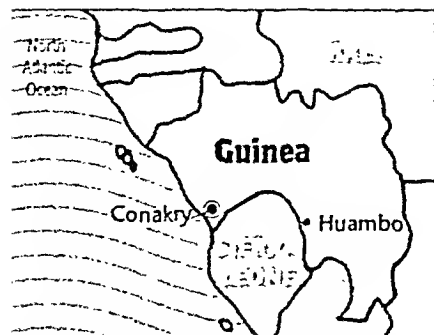
After remaining as a Spanish colony for about three centuries (1524-1821), Guatemala became a republic in 1839. Guatemala's claims to British Honduras (Belize) led to the rupture of diplomatic relations with Britain in 1963. More than 100,000 people have been killed in civil wars since 1961.

Economy: The soil is very fertile. Agriculture is the most important occupation. Principal crop is coffee. Other important export items are bananas, cotton, gum, sugar, maize, tobacco, fruits and beef. **Industry:** Food and beverages, textiles, tyres, construction materials, tobacco and chemicals.

Indian Mission In Guatemala: Honorary Consulate of India, P.O. Box No. 886, 14 Calle 14-84 zona 10, Oakland, Ciudad de Guatemala, Guatemala. Tel: 00-502-3682271; Fax: 00-502-3664049.

71. Guinea

(Republic of Guinea) Republique de Guinée
Capital: Conakry; **Other Large Cities:**



Kankan, Kindia ; Area: 245,857 sq.km; Population: 9,690,222; Languages: French and 8 national languages; Religions: Muslim-85%, Christian-8%, indigenous beliefs-7%; Literacy: 35.9% (in French); Life Expectancy: 49.7; Currency: Franc (\$1=4600); p.c.i: \$ 2,000; Date of Independence: 2nd October, 1958.

Government Type: Republic; **President:** Gen. Lansana Conte. **PM:** Cellou Dalein Diallo.

History: Guinea is a former French overseas territory on the Atlantic coast of West Africa.

Under the constitution of the Fifth (French) Republic, Guinea voted for secession and proclaimed itself an independent republic on October 2, 1958. The first President was Sekou Toure. The army mutiny of Feb. 1996 was suppressed by President Conte.

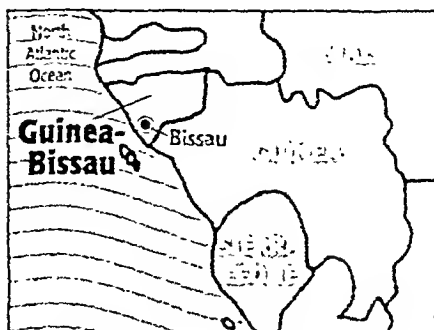
Economy: Subsistence agriculture supports 80% of the population. Main crops are cassava, plantains, sugarcane, bananas and palm kernels. It exports coffee, honey, bananas, palm kernels, iron and aluminium ore. Guinea has probably the world's largest deposit of bauxite.

Ten per cent of Guinea's population is composed of refugees from neighbouring Sierra Leone and Liberia. This is a burden on the weak economy.

Mission in India: Embassy of Guinea stationed at Moscow.

72. Guinea-Bissau

(Republic of Guinea-Bissau) Republica da Guiné-Bissau



Capital: Bissau ; **Area:** 36,125 sq.km ; **Population:** 1,442,029; **Languages:** Crioulo, Portuguese and tribal languages; **Religions:** indigenous beliefs-50%, Muslim-45%, Christian-5%; **Literacy:** 42.4%; **Life Expectancy:** 46.87 ; **Currency:** CFA Franc (\$1=518.98); p.c.i: \$ 680; **Date of Independence:** 24th September, 1973.

Government Type: Republic; **President:** Joao Bernardo 'Nino' Vieira; **PM:** Aristides Gomes.

History: Guinea-Bissau, formerly Portuguese Guinea, is on the Atlantic coast of West Africa. The land is part plain and part plateau.

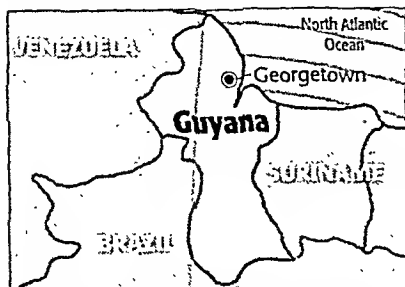
Guinea-Bissau unilaterally declared independence in 1973. Portugal recognised its independence in 1974. Joao Bernardo Vieira who seized power in 1980, was elected in 1989 and re-elected in 1994. A civil war was triggered by an army uprising in June, 1998 and Vieira was toppled. There was a military coup in 2003.

In May '97, Guinea-Bissau joined the French Franc Zone.

Economy: The main occupation is agriculture. Swamp rice (grown in the coastal plains), coconuts, cassava, sweet potatoes and maize form the important crops. The cash crops are groundnuts and palm oil. Cattle raising is a traditional activity. Food processing, beer

73. Guyana

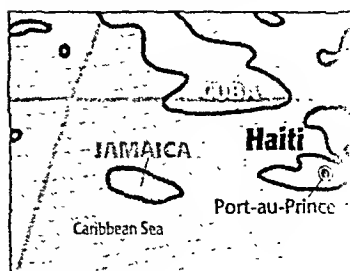
(Co-operative Republic of Guyana)



Capital: Georgetown; Other Large Cities: Linden, New Amsterdam; Area: 214,969 sq.km; Population: 767,245; Languages: English, Hindi, Urdu, Creole; Religions: Christian-50%, Hindu-35%, Muslim-10%, others-5%; Literacy: 98.8%; Life Expectancy: 65.86; Currency: Guyanese Dollar (\$1=190); p.c.i: \$4,600 ; Date of Independence: 26th May, 1966.

74. Haiti

(Republic of Haiti) Republique d' Haiti



Capital: Port-au-Prince; Area: 27,750; Population: 8,308,504; Languages: (official), and Creole; Religions: Roman Catholic-80%, Protestant-16%, none-1%, 3%; Literacy: 52.9%; Life Expectancy: 52.9; Currency: Gourde (\$1=38.65); p.c.i: \$4,600 ; Date of Independence: 1st January, 1804

Government Type: Elected Council of State
President: René Préval

Economy: Chief agricultural products: Coffee, sugar, bananas, rice, cocoa, tobacco, sisal and cotton. Industry: Sugar refining, textiles and cement. Rum and other spirits are distilled from molasses and exported. Bauxite is the chief mineral exported. Tourism is Haiti's second largest source of foreign exchange. Two-thirds of Haiti's inhabitants live in poverty, half of all adults are illiterate and less than a quarter of rural children attend primary school. Infant and maternal mortality rates remain among the highest in the world.

Outside Africa, Haiti has the highest rate of HIV infection among adults: 5 percent. It produces more new cases of HIV-AIDS each year than the entire U.S.

Recent Events: Haiti went to polls in February 2006, the first since former president Aristide was overthrown in 2004. Rene Preval was declared the winner of the presidential vote after a deal was reached over spoiled ballot papers.

Indian Mission in Haiti: Honorary Consulate of India, C/o. Hnadal & Fils, 199, Rue Du Magasin de L'Etat, P.O.Box No.633, Port-au-Prince (Republic of Haiti). Tel: 00-(509) 222310; Fax: 00-(509) 238489.

75. Honduras

(Republic of Honduras) Republic de Honduras



Capital: Tegucigalpa D.C.; **Area:** 112,088 sq.km; **Population:** 7,326,496; **Languages:**

Spanish and some Indian dialects; **Religions:** Roman Catholic-97%, Protestant-3%; **Literacy:** 76.2%; **Life Expectancy:** 69.33; **Currency:** Lempira (\$1=18.89); **p.c.i:** \$ 2,900; **Date of Independence:** 15th September, 1821.

Government Type: Republic; **President:** Manuel Zelaya Rosales.

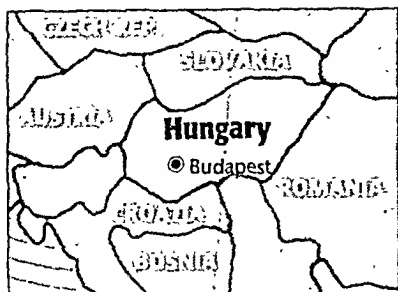
History: Honduras is a republic of Central America lying between Nicaragua, El Salvador and Guatemala. It has a long northern coastline on the Caribbean and a narrow southern outlet to the Pacific. Originally a Spanish colony, Honduras became independent in 1821. The country has gone through a series of dictatorships, military juntas, coups and counter-coups.

Economy: Honduras is one of the poorest countries in the western hemisphere. The chief crop is bananas which constitute 65 per cent of the country's exports. Coffee, cotton, maize and tobacco are also grown. Timber is abundant and cattle raising is a major occupation. Industry: Textiles, wood products, cigars, beer and cement.

Recent Events: In April 2006, free trade deal with the US came into effect. The Honduras Congress approved the Central American Free Trade Agreement (Cafta) in March 2006. Honduras and neighbouring El Salvador inaugurated their newly-defined border. The countries had fought over the disputed frontier in 1969.

76. Hungary

(Republic of Hungary) Magyar Koztarsasag
Capital: Budapest; **Other Large Cities:** Miskolc, Debrecen; **Area:** 93,033 sq.km, **Population:** 9,981,334; **Languages:** Hungarian (Magyar); **Religions:** Roman Catholic-67.5%, Calvinist-20%, Lutheran-5%, atheist and others-7.5%; **Literacy:** 99.4%; **Life Expectancy:** Forint (\$1=217.014); **p**
Date of Independence: 1001 (I
tion by King Stephen I).



Government Type: Parliamentary Democracy; **President:** Laszlo Solyom; **PM:** Ferenc Gyurcsany.

Hungary is situated in East Central Europe. The eastern half of Hungary is mainly a great fertile plain, 'the Great Plain'. The west and the north are hilly.

History: Hungary had a stormy history being successively overrun by Huns, Magyars, Turks, Hungarians and Austrians. Hungary became an independent republic in 1918 and the Hungarian Socialist Republic in 1919. In 1990, Hungary embraced democracy and market economy. The last Soviet troops left Hungary in June, 1991. In July '97, NATO invited Hungary to become a full member of the alliance within two years. The country joined NATO in March '99.

Economy: Although an agricultural country in the past, since the Second World War Industry has come to account for more than half of its total economy. Hungary exports engineering products, machine tools, motor vehicles and electrical and electronic goods. Chief imports are iron ore, coal, crude oil and consumer goods. More than 97 per cent of agricultural land is collectivised. Vineyards occupy around 186,000 hectares. Other crops: Grains, sunflowers, potatoes and sugar beets.

Recent Events: In April 2006, over 10,000 troops and police were deployed to battle flooding as river Danube reached record levels.

Mission In India: Embassy of the Republic of Hungary, 2/50 M, Niti Marg, Chanakya-

puri, New Delhi-110021. Tel: 26114737; Teleax: 26886742.

E-mail: huembde12@vsnl.com

Indian Mission in Hungary: Embassy of India, Buzavirag utca 14, 1025 Budapest, Hungary. Tel: 00-36-1-3257742, 3257743; Fax: 00-36-1-3257745.

E-mail: chancery@indembassy.hu

Webset: www.chancery@indembassy.hu

77. Iceland

(Republic of Iceland) Lyoveldio Island



Capital: Reykjavik; **Area:** 102,846 sq.km; **Population:** 299,388; **Languages:** Icelandic; **Religions:** Evangelical Lutheran-87.1%, Other Protestant -4.1% **Literacy:** 99%; **Life Expectancy:** 80.31; **Currency:** Krona (\$1=75.135); **p.c.i:** \$ 35,600; **Date of Independence:** 17th June, 1944.

Government Type: Constitutional Republic; **President:** Olafur Ragnar Grimsson; **PM:** Geir H. Haarde.

Iceland is an island close to the Arctic Circle in the North Atlantic. The Norwegian Sea is on the eastern side of Iceland. The warm Gulf Stream makes the winters mild.

During the short cool summers, there is perpetual daylight for many weeks, making it an island of the Midnight Sun. The island has many geysers and hot springs. Iceland has over 200 volcanoes, many of them still active.

History: The people of Iceland are the descendants of the dare-devil Vikings of Nor-

way. After having been independent till the 13th century it became part of Norway, and then passed under Danish rule. In 1941 the Althing (the world's oldest surviving parliament) voted for complete independence and a republic was formed on June 17, 1944. Iceland's language has maintained its purity for 1000 years.

Economy: Much of the land in Iceland lies uncultivated. Potatoes, turnips and hay are the major crops. Fishing industry is highly developed. Exports: Marine products and aluminium. Iceland taps thermal and hydro power for energy-hungry industries. A \$2 billion hydro-electric system and aluminium smelter to be built by 2008 will double growth from the current unusually low rate of 1.5%.

Mission in India: Embassy of Iceland stationed at London.

Consulates: Consulate General, 'Speedbird House', 41/2 M, Connaught Circus, New Delhi-110 001. Tel: 23417122; Fax: 23416275.

E-mail: khemka@13.vsnl.net.in

E-mail: Khemka@de13.vsnl.net.in

Indian Mission in Iceland: Honorary Consulate General of India, Solvallagata 48, 101, Reykjavik, Iceland. P.O. Box No. 678, 121 Reykjavik. Tel: 00-354-1-28255; Fax: 00-354-1-625010.

78. India

(Republic of India)

Capital: New Delhi; **Other Large Cities:** Mumbai, Kolkata, Chennai; **Area:** 3,287,263 sq.km.; **Population:** 1,095,351,995; **Languages:** Hindi (official), English, 18 officially recognised languages; **Religions:** Hindu-81.3%, Muslim-12%, Christian-2.3%, Sikh-1.9%, Other groups including Buddhist, Jain, Parsi-2.5; **Literacy:** 64.8%; **Life Expectancy:** 64.35; **Currency:** Rupee (US \$1 = 46.84); **p.c.i:** \$ 3,300; **Date of Independence:** 15th August, 1947.

Government Type: Federal Republic; **President:** A.P.J. Abdul Kalam; **PM:** Dr. Manmohan Singh.

For details see Part- Eight, India

79. Indonesia

(Republic of Indonesia) Republik Indonesia



Capital: Jakarta; **Other Large Cities:** Surabaya, Bandung; **Area:** 1,904,569 sq.km; **Population:** 245,452,739; **Languages:** Bahasa Indonesian, Dutch, English, Javanese and other Austronesian languages; **Religions:** Muslim-88%, Protestant-5%, Roman Catholic-3%, Hindu-2%, Buddhist-1%, others-1%; **Literacy:** 87.9%; **Life Expectancy:** 69.87; **Currency:** Rupiah (\$1=9292.50); **p.c.i:** \$ 3,600; **Date of Independence:** 17th August, 1945.

Government Type: Republic; **Head of State & Govt (President):** Susilo Bambang Yudhoyono.

History: Formerly the Dutch East Indies, the Republic of Indonesia, the biggest Islamic nation, is an archipelago state consisting of about 13,500 (6000 inhabited) islands extending some 5150 km. along the Equator in the Indian and Pacific Oceans.

The largest islands of the archipelago are Sumatra, Java, Kalimantan (Indonesian Borneo), Sulawesi and Irian Java.

The islands were made an integral part of the Netherlands Kingdom in 1922. During World War II, Indonesia was under Japanese military occupation. On Aug. 17, 1945, Indonesia proclaimed independent Dutch.

After a war of independence, the Netherlands transferred sovereignty to Indonesia on December 27, 1949. A republic was declared August 17, 1950, with Dr. Sukarno as president. Gen. Suharto, head of the army was named President in 1968.

The year 1998 was marked by economic chaos. Gen. Suharto was forced to resign in May. He was succeeded by his vice-president, Bacharuddin Jusuf Habibie. Abdurrahman Wahid, leader of Indonesia's largest Muslim organisation, was elected president in Oct. 20, 1999. He was on a collision course with the House of Representatives since Feb. after two scandals and debate on his impeachment began in May. On July 23, he was dismissed by National Assembly.

Indonesia annexed East Timor in 1976. A referendum (UN called it 'popular consultation') was held in East Timor on Aug. 30, '99. Ninety percent turned out, and the vote was for independence from Indonesia. East Timor slipped into violence and bloodbath. A UN interim administration took command in October. In May, 2002 East Timor became independent. Aceh and Irian Java are two provinces with long-running separatist movements.

Economy: One of the world's richest countries in natural resources, Indonesia has vast supplies of tin, oil and fairly big deposits of bauxite, copper, nickel, gold and silver. Agriculture is the main occupation of the people. Crops include rice, tobacco, coffee, rubber, cassava, maize, pepper, kapok, coconut, palm oil, tea and sugarcane. Forest products are a major source of foreign exchange. Food processing, textiles, paper, cement, automobile & cycle assembly works and chemicals factories have developed. With a foreign debt in excess of \$135 b., Indonesia is one of the largest debtor countries of the world.

Recent Events: In January 2006, an East Timorese report accused Indonesia of widespread atrocities during its 24-year occupa-

tion, holding it responsible for the deaths of more than 1,00,000 people. In February-March, deadly protests at a major US-owned gold and copper mine in Papua province followed attempts to remove illegal prospectors from the site. In May, a powerful earthquake killed thousands of people on the island of Java. In July, a tsunami, triggered by a large undersea earthquake, killed more than 500 people on the island of Java.

Mission in India: Embassy of the Republic of Indonesia, Kautilya Marg, 50-A, Chanakyapuri, New Delhi- 110021. Tel: 26118642-45; Fax: 26874402, 26886763, 26888279 (Visa), 26885460(comm).

E-mail: iembassy@giasd101.vsnl.net.in

Consulate General of the Republic of Indonesia: 19, Altamount Road, Cumballa Hill, Mumbai-400 026; Ph: 91-22-23868678, 23800940; E-mail: kjrimumb@bom3.vsnl.net.in

Indian Mission in Indonesia: Embassy of India, S-1, Jalan H.R. Rasuna Said, Kuningan, Jakarta Selatan 12950, Indonesia. Tel: 00-62-21-5204150, 5204152, 5204157; Fax: 00-62-21-5204160.

E-mail: meoijkt@indo.net.id/ eolisi@indo.net.id

80. Iran

(Islamic Republic of Iran) Jomhori-e-Islami-e-Iran



Capital: Teheran; **Other Large Cities:** Esfahan,

Mashad; Area: 1,648,000 sq.km; **Population:** 68,688,433; **Languages:** Persian (Farsi), Turk, Kurdish, Arabic; **Religions:** Shi'a Muslim-89%, Sunni Muslim-9%, Zoroastrian, Jewish, Christian and Baha'i-2%; **Literacy:** 79.4%; **Life Expectancy:** 70.26; **Currency:** Rial (\$1=9166.50); **p.c.i:** \$ 8,300; **Date of Independence:** 1st April, 1979.

Government Type: Islamic Republic; **President:** Mahmud Ahmadi-Nejad.

History: Iran, formerly Persia, lies between Caspian Sea and the Persian Gulf and consists of a central plateau surrounded by mountains. A popular revolution of Islamic character swept the long-ruling Shah Mohammed Reza Pahlavi from power and installed a strict clerical leadership under Ayatollah Ruhollah Khomeini, spiritual leader of the Shia Muslim community. An Islamic Republic was proclaimed on April 1, 1979.

Iran is a country of great antiquity, celebrated alike for its culture and military valour.

Economy: Agriculture employs 30% of the labour force. The chief products are wheat, barley, rice, fruits (largest producer of dates), wool and sugar beets. Iran is one of the biggest oil-producing regions in the Middle East. It owns 7.5% of total world oil reserves and 15% of global gas deposits. Emeralds and other gems are found in Khorassan and Kerman. Persian carpets, made on handlooms are famous. Other industries: Textiles, cement, processed foods, steel and copper fabrication.

Recent Events: In January 2006, Iran broke IAEA seals at its Natanz nuclear research facility. In February, IAEA voted to report Iran to the UN Security Council over its nuclear activities. Iran resumed uranium enrichment at Natanz. In March, earthquakes killed scores of people and rendered thousands homeless in Lorestan province. In April, Iran claimed it had succeeded in enriching uranium at its Natanz facility.

Mission In India: Embassy of the Islamic

Republic of Iran, No. 5, Barakhamba Road, New Delhi-110001. Tel: 23329600-02; Fax: 23325493, 23713704 (Armed Forces).

E-mail:iranemin@vsnl.com

Consulate General of The Islamic Republic of Iran: "Swapnalok", First Floor, 47, Nepean Sea Road, Mumbai-400 026; Ph: 3630073, 3631029

Indian Mission In Iran: Embassy of India, 46, Mir-Emad, Corner of 9th Street, Dr.Beheshti Avenue, P.O. Box No. 15875-4118, Tehran (Islamic Republic of Iran). Tel: 00-98-21-87551034/5; Fax: 00-98-21-8755973, 8745557.

E-mail:indemteh@dpi.net.ir

81. Iraq

(Republic of Iraq) al Jumhoriya al 'Iraqia



Capital: Baghdad; **Other Large Cities:** Basra, Mosul; **Area:** 438,446 sq.km; **Population:** 26,783,383; **Languages:** Arabic (official) and Kurdish; **Religions:** Muslim-97% (Shi'a-60-65%, Sunni-32-37%), Christian and others-3%; **Literacy:** 40.4%; **Life Expectancy:** 69.01; **Currency:** New Iraqi Dinar (\$1=1469.6); **p.c.i:** \$ 3,400 ; **Date of Independence:** 3rd October, 1932.

Government Type: Transitional Government; **Govt.:** The country is under U.S. control; **President:** Jalal Talabani; **P.M.** Maliki.

History: Iraq is in the Middle East and

from Gaza Strip and Jericho. On Sept. 13, the historic accord between PLO and Israel was signed in Washington for limited Palestinian self-rule in Gaza and West Bank. Israel and Jordan signed (July, '94) a declaration ending 46-year state of war. Israeli-PLO agreement of Aug. '95 expanded Palestinian self-rule in West Bank.

Under an accord of Oct. '98, Israel yielded more West Bank territory to Palestinians in exchange for new security guarantees. In June 1999, Israel announced plans to extend Jerusalem municipal authority over nearby Jewish settlements in the West Bank. Palestinians called it a 'de facto annexation'. In Sept. Israel and Palestinians signed an agreement providing for the implementation of the Wye Memorandum.

On May 25, 2003 Israeli cabinet approved plan for a Palestinian state by 2005 as per the US-backed peace 'road map'. Strong disagreement arose in July between Israel and Palestinian Authority over the number of Palestinian prisoners Israel was prepared to release. Israel went ahead with building the controversial security fence that divides Israel and Palestinian areas. Hamas leader Abu Shanab was killed by Israel. Hope for the road map was shattered. In Set., Israel said it was prepared to 'remove' Arafat.

Israel has developed both agriculture and industry in the little land allotted to it with considerable expertise and efficiency. They have literally made the deserts bloom. Kibbutzim (collective cultivation), irrigation schemes and reclamation of desert-land formed the main feature of agricultural development. Citrus fruits are the main exports. Wine-making is an extensive industry. In diamond-cutting, Israel comes next only to Belgium. Other industries are textiles, electronics, machinery, processed foods and chemicals.

Gaza Strip: Area-363 sq.km; Pop-1,054,200. Agreements between Israel and PLO in 1993 and '94 provided for interim self-

rule in Gaza. Israel is in control of security, while Palestinian Authority is responsible for civil govt. Most inhabitants are Palestinian Arabs.

West Bank: Area- 5,879 sq. km; Pop.-1,557,000. Palestinian Authority administers several major cities, but Israel retains control over much land. In '94, Jericho was given to Palestinian control. Self-rule was expanded in '95. In '97 there was agreement on partial pullout from Hebron.

Recent Events: The centrist Kadima party won a slim majority in elections in March 2006. Israel waged a weeks-long military campaign against Hezbollah guerrillas in Lebanon. Political opponents alleged shortcomings in the conduct of the war. The Prime Minister said the offensive had destroyed much of Hezbollah's weaponry and infrastructure.

Mission in India: Embassy of Israel, 3, Aurangzeb Road, New Delhi-110 011; Tel: 201 3238; Fax: 2301 4298.

E-mail : Israelem@vsnl.com

Indian Mission in Israel: Embassy of India, 4, Kaufman Street, Sharbat House, Post Box No. 50095, Tel Aviv 68012, Israel. Tel: 00-972-3-5101431; Fax: 00-972-3-5101434.

E-mail: indemtel@netvision.net.il

84. Italy

(Italian Republic) Repubblica Italiana



Capital: Rome; **Other Large Cities:** Milan, Naples, Turin, Florence; **Area:** 301,278

sq.km.; Population: 58,133,509; Languages: Italian; Religions: Roman Catholic; Literacy: 98.6%; Life Expectancy: 79.81; Currency: Euro (\$1=0.791); p.c.i: \$ 29,200 ; Date of Independence: 17th March, 1861.

Government Type: Republic; President: Giorgio Napolitano; PM: Romano Prodi.

History: The Italian Republic occupies the long peninsular area in Europe shaped like a boot extending from the Alps into the Mediterranean Sea. The islands of Sicily (off the toe of the boot), Sardinia, Elba and Capri in the Mediterranean belong to Italy.

Mount Etna, an active volcano, rises to 3,274 m. Italy's largest northern lakes are Garda, Maggiore and Como. The main river is the Po.

Italy, once the headquarters of the great Roman Empire, disintegrated into many petty states during the latter Middle Ages. Modern Italy began to develop when King Victor Emmanuel II of Savioa became ruler.

On April 28, 1945 Benito Mussolini, the Fascist dictator, was put to death. Consequent on a referendum on June 2, 1946, Italy voted for a Republic. The king laid down his kingship. Italy is a member of the European Union.

Economy: Since World War II, Italy has revolutionised agricultural production. The chief crops are grapes, wheat, sugarbeet, fruits and vegetables. Italy is among the highly industrialised countries of the world, main products being steel, machinery, electrical, mechanical and electronic gadgets, automobiles, chemicals, cement, textiles and shoes. Italy is world's largest jewellery maker. Tourism is an important source of revenue, providing employment and an influx of foreign currency.

In economic terms, the country's great strength has been in manufacturing. It does have some large multinational companies, notably Fiat (cars) and Olivetti (telecommunications), but manufacturing is dominated by networks of thousands of small firms,

chiefly in clothing, furniture, kitchen equipment, and white goods such as refrigerators and cookers.

Rome celebrated its 2753rd birthday in May, 2000. The colosseum was reopened for public show in July, 2000.

Recent Events: In April 2006, Centre-left leader Romano Prodi won closely-fought general elections. Italy's most-wanted man, suspected head of the Sicilian mafia Bernardo Provenzano, was captured by police. In June, National referendum rejected constitutional reforms intended to boost the powers of the prime minister and regions. Italy won the 2006 FIFA world Cup soccer tournament beating France

Mission in India: Embassy of Italy, 50-E, Chandragupta Marg, Chanakyapuri, New Delhi-110021. Tel: 26114355, 26114359, 26114353; Telefax: 26873889.

E-mail: italemb@de13.vsnl.net.in

Indian Mission in Italy: Embassy of India, Via XX Settembre, 5, 00187, Rome, Italy. Tel: 00-39-06-4884642 to 45; Fax: 00-39-06-4819539.

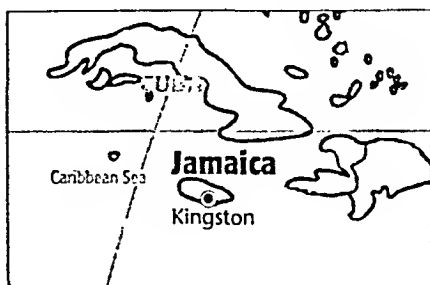
E-mail: ind.emb@flashnet.it

Ivory Coast

(See under Cote D'Ivoire)

85. Jamaica

Capital: Kingston; Area: 11,425 sq.km; Population: 2,758,124; Languages: English and



Jamaican Creole; Religions: Protestant-61.3%, Roman Catholic-4%, others including some spiritual cults-34.7%; Literacy: 87.95%; Life Expectancy: 73.24; Currency: Dollar (\$1=66.946); p.c.i: \$4,400; Date of Independence: 6th August, 1962.

Government Type: Constitutional Parliamentary Democracy; **Gov.Gen.:** Kenneth O. Hall; **PM:** Portia Simpson-Miller.

Jamaica, an island in the Greater Antilles group of the West Indies, is situated in the Caribbean Sea, 144 km south of Cuba.

History: Jamaica was visited by Columbus in 1494 and ruled by Spain till 1655 when Britain occupied it. On August 6, 1962 Jamaica became fully independent and a member of the Commonwealth. About 75% of the population is of African ethnic origin.

Economy: Agriculture, mining and tourism form the backbone of the economy. The dominant crop is sugar, with molasses and rum as important by-products. Bananas, citrus fruits and coconuts are also grown. Jamaica is the world's second largest producer of bauxite and alumina. Other industries are cement, tobacco, consumer goods and tourism.

Mission in India: Embassy of Jamaica stationed at Ottawa

Indian Mission In Jamaica: High Commission of India, 4, Retreat Avenue, P.O. Box No. 446, Kingston-6, Jamaica. Tel: 00-1-876-9273114, 9274270; Fax: 00-1-876-978280, 97803591.

E-mail: hicomindkin@cwjamaica.com

86. Japan

(Nippon)

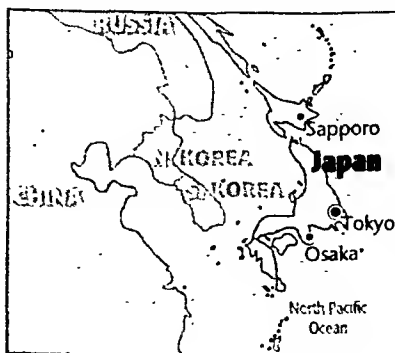
Capital: Tokyo; **Other Large Cities:** Yokohama, Osaka, Sapporo, Kyoto, Hiroshima; **Area:** 377,765 sq.km; **Population:** 127,463,611; **Languages:** Japanese; **Religions:** Shinto and Buddhism-84%, others-16% (including Christian-0.7%); **Literacy:** 99%; **Life Expectancy:** 81.25; **Currency:** Yen (\$1=114.96); p.c.i: \$

31,500; **Date of Independence:** 660 B.C.

Government Type: Parliamentary Democracy; **Head of State:** Emperor Akihito; **PM:** Junichiro Koizumi.

History: Japan, an archipelago off E. coast of Asia, consists of four main islands, Honshu (Mainland), Hokkaido, Kyushu and Shikoku and a number of smaller islands of which Okinawa is one. Japan has a deeply indented coastline measuring 26,600 km. Main ports are Yokohama, Kobe, Nagoya and Osaka. There are about 60 more or less active volcanoes of which the best known is Mount Aso. The famous Mount Fuji is not active. Legend has it that the Japanese Empire was founded by Emperor Jimmu in 660 B.C. In A.D. 1868 Emperor Meiji united the whole of Japan under his rule. Japan had little trade relations with foreign countries until 1871 when it entered into a trade treaty with USA. After the feudal system was abolished, westernisation set in. In 1952, Japan regained its sovereignty. Japan's victory in the Russo-Japanese War of 1904-05 raised her prestige among European powers.

Economy: Rice, the staple food of Japan, is cultivated in half the area of arable land. Other crops are wheat, barley, potatoes and tobacco. Except for limestone and sulphur, Japan is poor in minerals and Japanese industry is heavily dependent on imported raw materials and fuel. Japan, one of the most industrially advanced countries of the world,



is a leader in technology and the world's second richest country. The principal industries are automobiles, iron and steel, chemicals, textiles (cotton, wool, silk and synthetics), fishing, ceramics, precision instruments, fertilisers, machinery and shipbuilding. Japan has evolved an extensive fishing industry.

Japanese women have been the world's longest lived since 1985 and Japanese men since 1986.

In April, 1997 Japanese cabinet approved a bill allowing U.S. bases to continue to use land in Okinawa, a key military foothold in East Asia.

Recent Events: Japan and China failed to reach a breakthrough at talks in Beijing over the issue of who control oil and gas reserves in disputed areas of the East China Sea.

Mission in India: Embassy of Japan, 50-G Shantipath, Chanakyapuri, New Delhi - 110 021. Tel: 26876581, 26876564; Fax: 26885587.

E-mail: jpprocol@nda.vsnl.net.in

Web: www.japan-emb.org.in

Cultural & Information Centre, 32-Ferozeshah Road, New Delhi-110 001. Tel:3329803; Fax:371-2124

Indian Mission in Japan: Embassy of India, 2-2-11, Kudan-Minami, Chiyoda-ku, Tokyo-102, Japan. Tel: 00-81-3-32622391 to 97; Fax: 00-81-3-32344866.

E-mail: indembjp@gol.com.

87. Jordan

(Hashemite Kingdom of Jordan) al Mamlaka al Urduniya al Hashemiyah

Capital: Amman; **Other Large Cities:** Zarka, Irbid, Salt; **Area:** 89,287 sq.km; **Population:** 5,906,760; **Languages:** Arabic and English; **Religions:** Sunny Muslim-92%, Christian-6%, others-2%; **Literacy:** 91.3%; **Life Expectancy:** 78.4; **Currency:** Dinar (\$1 = 0.708); **p.c.i:** \$ 4,700; **Date of Independence:** 25th May, 1946.

Government Type: Constitutional Monarchy; **Head of State:** King Abdullah II; **PM:** Marouf Suleiman Bakhit.

History: A constitutional monarchy in south-west Asia, Jordan was popularly known as Trans-Jordan till 1949, when the popular name was changed to the Hashemite Kingdom of Jordan. The population is chiefly Arab of whom the majority are Muslims. In 1946, Jordan was proclaimed an independent kingdom.

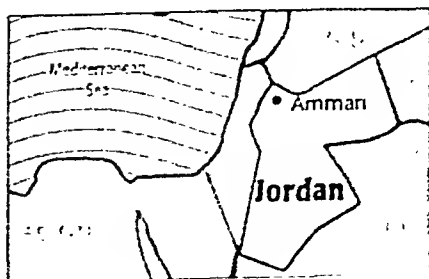
Economy: Jordan is largely desert but the western portion is fertile and produces citrus fruits, wheat, barley, lentils and water melons. Phosphate and potash make up the country's most important export item, but tourism remains its main foreign exchange earner.

Economic growth was remarkable during 1977-'82, described as the 'boom years'. School enrollment is currently one of the highest among developing countries - 94% for basic education. Almost 99% of the population have access to electricity and safe water. Industry accounts for 26% of GDP, agriculture 4%, and services sector 70%.

Textiles, cement, food-processing, petroleum products, iron and fertiliser are major industries.

On July 25, 1994, Israel and Jordan signed a joint declaration in Washington, ending 46 years of hostility.

Recent Events: Jordan was caught in the middle of hostility between Iraq and USA. Much of its oil comes from Iraq. USA is its largest donor.



Mission In India: Embassy of the Hashemite Kingdom of Jordan, 30, Golf Links, New Delhi-110 003; Tel: 24653318, 24653099; Fax: 24653353.

E-mail: jordemb@ndf.vsnl.net.in

Indian Mission In Jordan: Embassy of India, Post Box 2168, 1st Circle, Amman-11181, Jordan. Tel: 00-962-6-4622098, 4637262; Fax: 00-962-6-4659540.

E-mail: indembjp@firstnet.com.jo

88. Kazakhstan

(Republic of Kazakhstan) Kazak Respubli-kasy



Capital: Astana (also known as Akmola) ;
Other Large Cities: Karaganda, Chimkent;
Area: 2,717,300 sq.km; **Population:** 15,233,244; **Languages:** Kazakh, Russian, German; **Religions:** Muslim-47%, Russian orthodox-44%, Protestant-2%, others-7%; **Literacy:** 98.4%; **Life Expectancy:** 66.89; **Currency:** Tenge (\$1= 119.825); p.c.i: \$ 8,200; **Date of Independence:** 16th December, 1991.

Government Type: Republic; **President:** Nursultan A. Nazarbayev; **PM:** Daniyal Akhmetov.

History: A former Soviet Republic which declared independence on December 16, 1991, Kazakhstan stretches from the Chinese border to the Caspian Sea and is bounded by Russia, Uzbekistan and Kyrgyzstan.

The second largest former Soviet Republic is an ethnically diverse country whose popula-

tion includes over hundred nationalities. About 60% of the people live in urban areas. Half of the population is Russian or Ukrainian working on farms and in industries.

Economy: Agriculture: Grain, sugar beet, potatoes, vegetables, meat, milk, eggs, cotton. Noted for its sheep from which high quality wool is obtained.

Natural resources: Half of former Soviet Union's total deposits of copper, lead and zinc are in Kazakhstan. Other minerals: coal, tungsten, oil, nickel, chromium, molybdenum, manganese. Kazakhstan has the second largest oil field in the world in Kasagan and sits on an estimated 3 billion tonnes of oil and 2 trillion tonnes of gas.

Industry: Iron ore, sulphuric acid, agricultural machinery, ferroconcrete, knitwear, footwear, hosiery. Among former Soviet Union's industrial republics, Kazakhstan has the third place.

In July, '98 Kazakhstan and Russia signed a pact of 'eternal friendship and cooperation' which provides for mutual military assistance in case of outside aggression against either. In Jan. '99, President Nazarbayev was re-elected for another 7-year term.

Recent Events: In January 2006, opposition leader Galymzhan Zhakiyanov returned home to Almaty from internal exile after being released on parole. In February, opposition figure Altynbek Sarsenbauly, his bodyguard and driver were shot dead outside Almaty.

Mission In India: Embassy of the Republic of Kazakhstan, 4, Olof Palme Marg, Vasant Vihar, New Delhi-110 057; Tel: 26144779, 26147983; Telefax: 26144778.

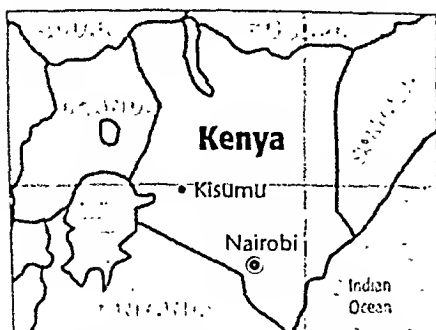
E-mail: embaskaz@giasd101.vsnl.net.in

Indian Mission in Kazakhstan: Embassy of India, Ulitsa Maulenova 71, Almaty-480091, Kazakhstan. Tel: 00-703272-921411, 694746; Fax: 00-7-3272-92667.

E-mail: india@in.emb.almaty.kz / chancery@indembasy.almaty.kz

89. Kenya

(Republic of Kenya) Jamhuriya Kenya



Capital: Nairobi; **Other Large Cities:** Mombasa, Kisumu; **Area:** 582,646 sq.km; **Population:** 34,707,817; **Languages:** Kiswahili, English, Kikuyu and several other local languages; **Religions:** Protestant-45%, Roman Catholic-33%, Indigenous beliefs-10%, Muslim-10%, others-2%; **Literacy:** 85.1%; **Life Expectancy:** 49.78; **Currency:** Shilling (\$1=73.65); **p.c.i:** \$ 1,100; **Date of Independence:** 12th December, 1963.

Government Type: Republic; **President & PM:** Mwai Kibaki.

History: Formerly a British colony, Kenya in East Central Africa became independent on December 12, 1963 (four years after the end of the violent Mau Mau uprising), and a Republic within the Commonwealth on December 12, 1964.

Economy: Kenya's prosperity rests largely on agricultural products. The chief cash crops are coffee, tea, sisal, cereals, wattle and pyrethrum. Kenya has a significant dairy industry. Mineral industries are being organised. Other industries include textiles, consumer goods and processed foods. Major exports are tea, coffee, horticulture, petroleum products and cement. Imports include crude petroleum, industrial machinery, iron and steel and drugs. Tourism has expanded considerably. Large game reserves have been developed.

Tribal clashes in the western provinces claimed thousands of lives in early 1990s.

Widespread unemployment and inflation were major problems in the first half of the decade.

The year 1997 witnessed pro-democracy clashes in the worst political violence since 1991, against Arap Moi's leadership. In Jan. '98, Arap Moi was sworn in for a final (fifth) five-year term as President.

On August 7, a devastating bomb explosion near the US embassy in Nairobi killed 200 people and injured 4000 others.

Recent Events: In January-February 2006, government ministers were linked to a corruption scandal involving contracts for a phantom company. One of them, Finance Minister David Mwiraria, resigned and said allegations against him were false. In March, armed police, acting on government orders, raided the offices and presses of the Standard group, one of Kenya's leading media companies. In April, visiting Chinese president Hu Jintao signed a contract allowing China to prospect for oil off the Kenyan coast.

Mission in India: High Commission of Kenya, 34, Paschimi Marg, Vasant Vihar, New Delhi - 110 057. Tel: 2614 6537/38, 26146540; Fax: 91-11-26146550.

E-mail: kenredel@ndf.vsnl.net.in

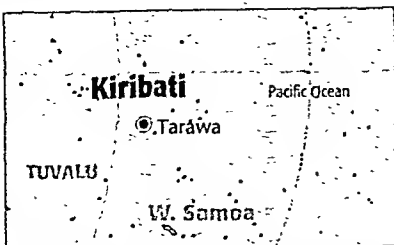
Indian Mission in Kenya: High Commission of India, Jeewan Bharati Building, Harambee Avenue, P.O. Box 30074, Nairobi, Kenya. Tel: 00-254-2-222566, 222567, 224500, 225180, Fax: 00-254-2-334167, 751644(R).

E-mail: comsechcinbo@form-net.com / hcinfo@iconnect.co.ke

90. Kiribati

(Republic of Kiribati) Ribaberikin Kiribati

Capital: Tarawa; **Area:** 861 sq. km; **Population:** 105,432; **Languages:** Gilbertese and English; **Religions:** Roman Catholic-52%, Protestant (congregational)-40%; **Life Expectancy:** 62.08; **Currency:** Australian Dollar / A\$ \$1 = \$1.35446; **p.c.i:** \$ 80; **Independence:** 12th July, 1979.



Government Type: Republic; **Head of State and Govt.:** Anote Tong.

History: Gilbert islands, till recently a British colony, became independent under the name Kiribati (pronounced Kiribas) in July, 1979.

Economy: These islands, spread over a vast area in South West Pacific, number around 33. All islands except Ocean Island (Banaba) are low atolls with coconuts, pandanus and bread fruit forming the main vegetation. The population is Micronesian and Polynesian. Agriculture and fishing are the main occupations. Ocean Island has high grade phosphate deposits which are being mined and exported. Copra is the other major export item.

Recent Events : In March 2006, Kiribati distinguished itself on the global conservation map with the declaration that it was creating the third largest marine protected area in the world, conserving an archipelago of some of the planet's most pristine coral reefs

Capital: Pyongyang; **Other Large Cities:** Hamhung, Chongjin; **Area:** 120,538 sq.km; **Population:** 23,113,019; **Languages:** Korean; **Religions:** Traditionally Buddhist and Confucianist, some Christian and syncretic Chondogyo (Religion of the Heavenly Way); **Literacy:** 99%; **Life Expectancy:** 71.65; **Currency:** Won (KPW) (\$1 = 142.45) ; **p.c.i:** \$ 1,000; **Date of Independence:** 15th August, 1945.

Government Type: Communist State; **President:** Marshal Kim Jong Il; **PM:** Pak Pong Ju.

The Democratic People's Republic of Korea occupies the northern part of the Korean peninsula.

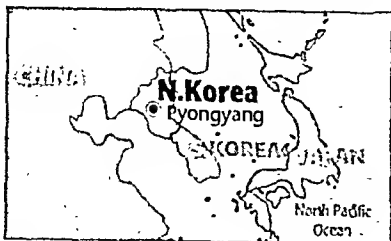
History: During the Second World War, America occupied South Korea, and Russia North Korea. At the Potsdam Conference, the 38th parallel of latitude was recognised as the line of division between the occupation areas of Russia and America. South Koreans formed the Republic of Korea in May, 1948. North Korea was formed into the Democratic People's Republic of Korea on Sept. 9, 1948. North Korean army attacked S. Korea in June, 1950, initiating the Korean War. U.S. and other western nations, with U.N. backing, supported the south. China sent an army across the border. The war ended in an armistice (July 1953) leaving Korea divided by a 'no-man's land' along the 38th parallel. Kim Il Sung, who ruled Korea since 1948 died in July, 1994.

Economy: All industries are nationalised. Agriculture is collectivised. Chief crops: rice, maize, potatoes. Industrial development has concentrated on heavy industry, electricity, metallurgy, machinery and chemicals. The country is rich in coal and iron and many non-ferrous metals and hydro-electric power. It is one of the five leading countries of the world in the production of tungsten, graphite and magnetite.

Several proposals for talks between North

91. Korea (North)

(Democratic People's Republic of Korea)
Chosun Minchuchui Inmin Konghwaguk



and South Korea on reunification have been made since 1980, but have repeatedly broken down.

The two Koreas agreed in 2000 to reconnect a rail link and to reopen border liaison offices. An accord was signed to reunite relatives separated by the division of the peninsula.

Recent Events: • In February 2006, high-level talks with Japan, the first since 2003, failed to yield agreement on key issues, including the fate of Japanese citizens abducted by North Korea. In July, North Korea test-fired a long-range missile, and some medium-range ones, to an international outcry.

Mission In India: Embassy of the Democratic People's Republic of Korea, D-14, Maharani Bagh, New Delhi - 110 065. Tel: 26829644, Telefax: 26829645.

Indian Mission in Korea (Democratic People's Republic): Embassy of India, 6, Munsudong, Taeheok Street, District Daed-onggang, Pyongyang, DPR Korea. Tel: 00-850-2-3817274, 3817215; Fax: 00-850-2-3817619.

92. Korea (South)

(Republic of Korea) Taehan Min'guk

Capital: Seoul; Other Large Cities: Pusan,



Inchon; Area: 98,859 sq.km; Population: 48,846,823; Languages: Korean; Religions: no affiliation-46%, Christian-26%, Buddhist-26%, Confucianist-1%, others-1%; Literacy: 97.9%; Life Expectancy: 77.04; Currency: Won (\$1=966.76); p.c.i: \$ 20,400; Date of Independence: 15th August, 1945.

Government Type: Republic; **President:** Roh Moo-hyun; **PM:** Han Myeong-sook.

History: The Republic of Korea, formally proclaimed on August 15, 1948, forms the southern part of the Korean peninsula. The period 1950-53 saw the Korean War, a tragic experience for the entire Korean people.

In 1991, the prime ministers of North and South Korea signed a declaration of non-aggression and reconciliation.

Economy: Chief crops are rice, wheat, barley, potatoes and vegetables. Fish is both an export item and a source of food. There are substantial coal deposits. Other minerals include iron, tungsten, graphite and fluorite. Has made big leaps in industry - textiles, electronics, steel, petrochemicals, ships and motor vehicles. Korean construction businesses are the most prolific in the world, and the nation ranks second in ship building, receiving orders amounting to 9.75 million gross tons (GT) for 208 ships in 2002.

Recent Events: In February 2006, South Korea and the US launched talks on a free trade agreement, potentially the largest free trade deal involving the US in Asia.

Mission in India: Embassy of the Republic of Korea, 9, Chandragupta Marg, Chanakya-puri Extn., New Delhi - 110 021. Tel: 26885412/19, 26885374-76; Fax: 26884840.

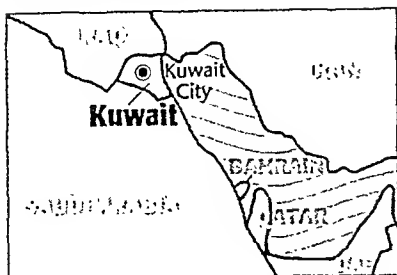
E-mail : embkorea@vsnl.com

Indian Mission in Korea (Republic of): Embassy of India, 37-3, Hannam-dong, Yongsan-ku, C.P.O. Box 3466, Seoul. Tel: 00-82-2-798 4257/7984268; Fax: 00-82-2-7969534, 7909938(R).

93. Kuwait

(State of Kuwait) Dawlat al-Kuwait

Capital: Kuwait City; Other Large Cities: Hawalli, as-Salimiya ; Area: 17,818 sq.km; Population: 2,418,393; Languages: Arabic and English; Religions: Islam; Literacy: 83.5%;



Life Expectancy: 77.2; **Currency:** Kuwait Dinar (\$1=0.289); **p.c.i:** \$ 19,200; **Date of Independence:** 19th June 1961.

Government Type: Constitutional Monarchy; **President:** Amir Sabah al-Ahmed al-Jabir al-Sabah; **PM:** Nasir al-Muhammed al-Ahmad al Sabah.

History: Kuwait, a small Arab state, is on the north western coast of the Persian Gulf between Iraq and Saudi Arabia. There are 9 islands off the coast of Kuwait. Rate of growth of population is 3.33%. More than 125 nationalities live in Kuwait.

One of the richest oil nations of the world, Kuwait was traditionally under the rule of the Al-Sabah dynasty founded in 1756. Became independent state on June 19, 1961.

Economy: Kuwait is a small, relatively open economy with proved crude oil reserves of about 96 billion barrels – 10% of world reserves. Petroleum accounts for nearly half of GDP, 95% of export revenue, and 80% of government income. Kuwait's climate limits agricultural development. Consequently with the exception of fish, it depends almost wholly on food imports. Other products: fertilisers, chemicals, building materials, shrimp. Only one percent land is cultivated.

Iraq invaded and annexed Kuwait on August 2, 1990. However they were beaten back by a united force under the U.N.

In May, '99, Kuwait moved further towards democracy with women given right to vote and run for parliament.

Recent Events: In April 2006, women cast

their votes for the first time, in a municipal by-election. In June, women failed to win any seats in their first attempt to compete in parliamentary elections. The opposition – a loose alliance of reformists, liberals and Islamists – made gains, winning nearly two-thirds of the seats.

Mission In India: Embassy of the State of Kuwait, 5-A, Shantipath, Chanakyapuri, New Delhi – 110021. Tel: 24100791; Fax: 26873516

Recent Events: Kuwait appointed a woman-Massouma al-Mubarak-as Planning Minister, the first woman minister in the country.

Indian Mission in Kuwait: Embassy of India, Diplomatic Enclave, Arabian Gulf Street, P.O. Box.No. 1450-Safat, 13015-Safat, Kuwait. Tel: 00-965-2530600, 2540612/13; Fax: 00-965-2525811, 2571192.

E-mail: indemb@ncc.moc.kw

Website: www2.kems.net/users/indemb/index.htm

94. Kyrgyzstan

(Republic of Kyrgyzstan) Kyrgyz Respubli-kasy



Capital: Bishkek; **Area:** 198,500 sq.km; **Population:** 5,213,898; **Languages:** Kirghyz, Russian; **Religions:** Muslim-75%, Russian Orthodox-20%, others-5%; **Literacy:** 98.7%; **Life Expectancy:** 68.49; **Currency:** Som (\$1=40.29); **p.c.i:** \$ 2,100; **Date of Independence:** 31st August, 1991.

Government Type: Republic; **President:** Kurmanbek Bakiyev; **PM:** Feliks Kulov.

History: A former Soviet Republic that became independent in December, 1991, Kyrgyzstan is situated on the Tien-Shan mountains. It has China, Kazakhstan, Uzbekistan and Tadzhikistan as neighbours.

Economy: Agriculture: Kyrgyzstan is famed for its livestock breeding. Bee-keeping is well-developed. Products: Grain, cotton, potatoes, vegetables, fruit, meat, milk, eggs, wool, tobacco.

Industry: Sugar, food, cotton, wool, tanning, flour mills, tobacco, timber, textile, engineering, metallurgy, oil and mining.

Recent Events: In January 2006, wrestler, Raatbek Sanatbayev, a candidate for the presidency of the Kyrgyz olympic committee, was shot dead. The post became vacant when the previous holder, Bayaman Erkinbayer, also died violently. In February, parliament speaker Omurbek Tekebayev resigned after row with president Bakiev.

Mission in India: Embassy of the Kyrgyz Republic, C-93, Anand Niketan, New Delhi-110021; Tel: 24108008; Fax: 24108009.

E-mail: alatoo@starith.net.

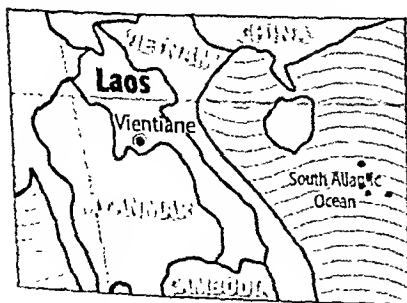
Web: kyrgyzembassyindia.org

Indian Mission in Kyrgyzstan: Embassy of India, 164-A, Chui (Prospect), Bishkek-720001, Kyrgyzstan. Tel: 00-996-312-210863; Fax: 00-996-312-660708, 210849

E-mail: india@elcat.kg / fs@elcat.kg

95. Laos

(Lao People's Democratic Republic) Sathalanalat Paxathipatai Paxaxon Lao



Capital: Vientiane; **Other Large Cities:** Savannakhet, Pakse; **Area:** 236,800 sq.km; **Population:** 6,368,481; **Languages:** Lao, Tribal, English, French; **Religions:** Buddhist-60%, animist and others-40%; **Literacy:** 66.4%; **Life Expectancy:** 55.49; **Currency:** New Kip (\$ 1=101,01); p.c.i: \$ 1,900; **Date of Independence:** 19th July, 1949.

Government Type: Communist State; **President:** Lt.Gen. Choummali Saignason; **PM:** Bouasone Bouphavanh

History: Laos-Lao People's Democratic Republic - occupies a strategic position in south east Asia. A French protectorate since 1893, Laos became an independent sovereign state within the French Union in 1949. Conflicts among neutralist, communist and conservative factions created a chaotic political situation. On Dec. 2, 1975 the republic was proclaimed.

In the 1980s, Vietnamese aid - military and financial - was the chief support. Since 1988, investment from Thailand and USA has been substantial. In 1997, Laos was admitted to ASEAN.

Economy: The chief products are rice, maize, tobacco, cotton. Major industrial products: Tin, timber, textiles.

Mission in India: Embassy of the Lao P.D.R., A 104/7 Parmanand Estate, Maharani Bagh, New Delhi-110 065; Tel: 26933320; Fax: 26323048.

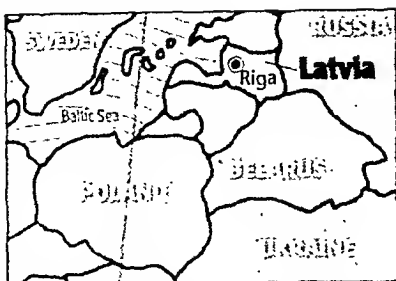
E-mail: amlaodl@ndb.vsnl.net.in

Indian Mission in Lao P.D.R.: Embassy of India, Rue That Luang, P.O. Box No. 225, Vientiane, Laos PDR. Tel: 00-856-21-413802, 413804, 416850/51; Fax: 00-856-21-412768. E-mail: indiaemb@laotel.com

96. Latvia

(Republic of Latvia) Latvijas Republika

Capital: Riga; **Other Large Cities:** Daugavpils, Liepaja; **Area:** 63,700 sq. km; **Population:** 2,274,735; **Languages:** Latvian, Lithuanian,



Russian; Religions: Lutheran, Roman Catholic, Russian orthodox; Literacy: 99.8%; Life Expectancy: 71.33; Currency: Lats (\$1=0.660); p.c.i: \$ 13,200; Date of Independence: 21st August, 1991.

Government Type: Parliamentary Democracy; **Head of State:** Mrs. Vaira Vike-Freiberga; **PM:** Aigars Kalvitis.

History: Latvia has the Baltic sea on the north and west. Neighbours are Estonia, Lithuania, Byelorussia and Russia. Latvia seceded from Soviet Union and attained independence in August, 1991, after having attempted to establish independence in 1990.

Latvia continues a pro-western foreign policy; It was largely cut off from the western world during 50 years of Soviet rule.

In June '99, Mrs. Vaira was elected President, the first democratically elected woman President of a central or east European country.

Economy: Urbanisation has changed the face of this predominantly agricultural country. Crops: oats, barley, rye, potatoes, flax, sugarbeet, meat, milk and eggs. Cattle breeding and dairy farming are chief occupations. Natural resources: peat, briquettes and gypsum. Industry: Electric railway passenger cars and long-distance telephone exchanges (the main producer of these in former Soviet Union), paper and woollen goods, sawn timber, mineral fertilisers, hosiery, garments, leather footwear, chemical fibre, buses and radio receivers.

Recent Events: Joined EU in 2004.

Mission In India: Hon. Consulate General

of Republic of Latvia, 48/11, Malcha Marg, Chanakyapuri, New Delhi-110 021. Tel: 2112931; Telefax: 26113753.

97. Lebanon

(Republic of Lebanon) al-Jumhuriya al-Lubnaniya



Capital: Beirut; **Other Large Cities:** Sidon, Tyre; **Area:** 10,400 sq.km; **Population:** 3,874,050; **Languages:** Arabic, French & English; **Religions:** Muslim-59.7% (Including Shi'a, Sunni, Druze, Isma'iliite, Alawite or Nusayri), Christian-39% (including Orthodox Christian, Catholic, Protestant), Jewish; **Literacy:** 87.4%; **Life Expectancy:** 72.88; **Currency:** Pound (\$1=1,504); **p.c.i:** \$ 6,200; **Date of Independence:** 22nd November, 1943.

Government Type: Republic; **President:** Emile Lahoud; **PM:** Fuad Siniora.

History: The Republic of Lebanon occupies a strip of land along the Mediterranean coast between Syria and Israel. Lebanon became independent in 1941.

According to constitutional conventions, the Maronite Christians and Sunni Muslims shared power. However, because of the 16-year-old civil war between the Christians (30%) and Muslims (70%) there has been no stable administration. Terrorist bombings were common in 1983; so was kidnapping of foreign nationals by Islamic militants in the 1980s.

In October 1990, Christian army led by Gen. Michel Aoun was defeated by the Syrian-backed militia supporting president Elias

Hrawi, who was installed in power by all Arab consensus. In the civil war, above 125,000 people are feared dead. A Syria-Lebanon treaty of 1991 recognised Lebanon as a separate independent state.

Syria, which has 30,000 troops in Lebanon, dominates this country militarily and politically. Israeli troops in southern Lebanon began evacuating outposts there in May, 2000.

Economy: Primarily an agricultural country, Lebanon produces olive oil, grain and fruits. The chief industries are oil refining, food processing, textiles, chemicals and cement. Tourism used to be a valuable source of income.

Recent Events: In February 2006, Denmark's embassy in Beirut was torched during a demonstration against cartoons in a Danish newspaper satirising the prophet Muhammad. Israel launched air and sea attacks on targets in Lebanon after Lebanon's militant Hezbollah group captured two Israeli soldiers. Civilian casualties were high and the damage to civilian infrastructure wide-ranging. In August, thousands of Israeli ground troops thrust into southern Lebanon in an apparent expansion of their military campaign.

Mission In India: Embassy of Lebanon, 26-B, Sardar Patel Marg, Chanakyapuri, New Delhi-110021. Tel: 26111919 & 26111415, Telefax: 26111818.

E-mail: lebemb@vsnl.net

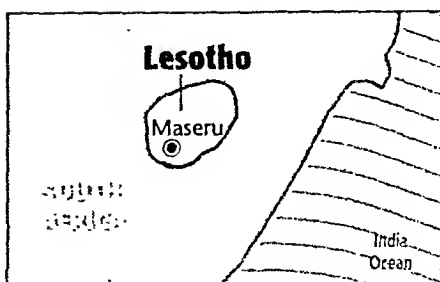
Indian Mission In Lebanon: Embassy of India, 31, Kantari Street, Sahmarani Building, P.O. Box No.113-5250 (Hamra) and 11-1764, Beirut, Lebanon. Tel: 00-961-1-373539, 372619; Fax: 00-961-1-373538.

E-mail: indermbei@dm.net.lb

98. Lesotho

(Kingdom of Lesotho)

Capital: Maseru; **Area:** 30,355 sq.km; **Population:** 2,022,331; **Languages:** English and



Sesotho; **Religions:** Christian-80%, indigenous beliefs-20%; **Literacy:** 84.8%; **Life Expectancy:** 34.4; **Currency:** Loti (plural Maluti) (\$1=6.84 Maluti); **p.c.i:** \$ 2,500; **Date of Independence:** 4th October, 1966.

Government Type: Parliamentary Constitutional Monarchy; **Head of State:** King Letsie III; **PM:** Pakalitha Mosisili.

History: The Kingdom of Lesotho is an enclave within the Republic of South Africa. Lesotho was a British protectorate under the name Basutoland. It became independent as Lesotho on Oct. 4, 1966. King Moshoeshoe II died in a car accident in January, 1996.

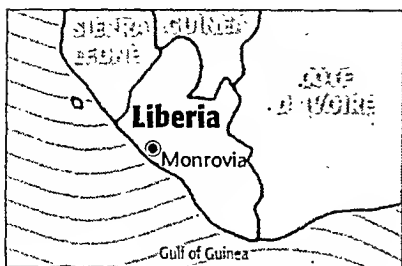
Economy: The principal occupation is agriculture. Crops: maize, grains, peas, beans. Livestock-raising is important activity. Lesotho possesses water and hydro-electric resources of great potential. Livestock, diamonds, wool and mohair are the main exports. **Industry:** Food processing. Most of Lesotho's GNP is provided by citizens working in S. Africa.

Mission in India: Embassy of Lesotho stationed at Beijing.

99. Liberia

(Republic of Liberia)

Capital: Monrovia; **Other Large Cities:** Buchanan; **Area:** 111,369 sq.km; **Population:** 3,042,004; **Languages:** English and tribal dialects; **Religions:** Indigenous beliefs-40%, Christian-40%, Muslim-20%; **Literacy:** 57.5%; **Life Expectancy:** 39.65; **Currency:** Liberian Dollar (\$1=54); **p.c.i:** \$ 1,000; **Date of Independence:** 26th July, 1847.



Government Type: Republic; President & PM: Ellen Johnson - Sirleaf.

History: Liberia lies on the Atlantic coast of Africa. It was founded in 1822 in order to settle freed American slaves in West Africa and declared a republic on July 26, 1847.

Economy: About 90 per cent of the population is engaged in agriculture, much of it at subsistence level. Main crops are cassava, coffee, rice, cocoa and palm oil. Iron ore and rubber are the main exports. **Industry:** Food processing, mining.

Civil strife that broke out in Dec. '89 tore the country apart making it the most violent country in the region. About half the population became refugees as a result of the Civil War, which claimed 150,000 lives.

In 1994, a 17-member coalition transition government was instituted. Factional fighting continued. The leaders signed about a dozen peace accords, only to resume fighting. Monrovia descended into chaos and bloodshed in 1996. Ruth Perry led a transitional government in Sept. '96, becoming modern Africa's first female head of state.

In July '97, Charles Taylor, a warlord who launched a civil war eight years ago to oust dictator Samuel Doe, won 75% of the presidential vote, and came to power, pledging to build a new country and apologising for the past bloodshed and violence.

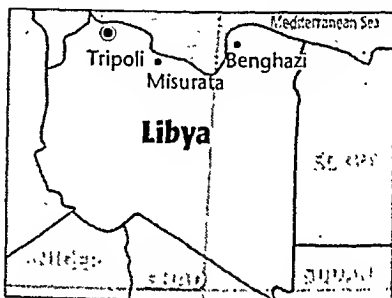
Recent Events: In February 2006, Truth and Reconciliation commission was set up to investigate human rights abuses between 1979 and 2003. In April, former President, Charles

Taylor, appeared before a UN-backed court in Sierra Leone on charges of crime against humanity. In June the Netherlands-based International Criminal Court agreed to host his trial.

Mission In India: Honorary Consulate General. Mohan House, Zamrudpur Community Centre, Kailash Colony Extn. New Delhi-110 048. Tel: 264333135; Fax: 26460191

100. Libya

(Socialist People's Libyan Arab Jamahiriya) al-Jamahiriyyah al-Arabiya al-Libya al-Shabiya al-Ishtirakiya



Capital: Tripoli; **Other Large Cities:** Benghazi, Misurata; **Area:** 1,759,540 sq.km; **Population:** 5,900,754; **Languages:** Arabic; **Religions:** Sunni Muslim-97%; **Literacy:** 82.6%; **Life Expectancy:** 76.69; **Currency:** Libyan Dinar (\$1 = 1.298); **p.c.i:** \$ 11,400; **Date of Independence:** 24th December, 1951.

Government Type: Military Dictatorship; **President:** Col. Muammar El-Gaddafi; **PM:** al-Baghdadi Ali al-Mahmudi.

History: An Arab state on the Mediterranean coast of North Africa, Libya changed its name to 'The Socialist People's Libyan Arab Jamahiriya' in 1977. 'Jamahiriya' means 'State of the masses'.

Formerly an Italian colony, Libya became an independent state in 1952. The king was deposed in 1969.

Economy: The main agricultural products

re wheat, barley, dates, olives, almond and citrus fruits. Fishing, tobacco processing, dyeing and weaving, handicrafts and petroleum are the important industries. Oil was discovered in 1957 and today Libya is one of the leading producers of oil.

Recent Events: In February 2006, at least 10 people were killed in clashes with police in Benghazi, part of a wave of international protests by Muslims who were angered by a Danish newspaper's cartoon depictions of the Prophet Muhammad. In May the US said it was restoring full diplomatic ties with Libya.

Mission in India: People's Bureau of the Great Socialist People's Libyan Arab Jamahiriya, 22, Golf Links, New Delhi - 110003. Tel: 24697771, 24697717; Telefax: 24633005.

E-mail: libya@bol.net.in

Indian Mission in Libya: Embassy of India, 16/18, Shara Mamoud Shaltout, Garden City, P.O. Box 3150, Tripoli, Libya. Tel: 00-218-21-4441835-36, 4447899; Fax: 00-218-21-3337560.

E-mail: indembtrip@mail.link.net.mt/ indembtrip@hotmail.com

ers-6.2%; Literacy: 100%; Life Expectancy: 79.68; Currency: Swiss Franc (\$1=1.232); p.c.i: \$ 25,000; Date of Independence: 23rd January, 1719.

Government Type: Hereditary Constitutional Monarchy; Head of State: Prince Hans Adam II; PM: Ottmar Hassler.

History: Liechtenstein is a small state on the upper Rhine, between Austria and Switzerland. It measures 24 km from north to south and 9 km from east to west. It became an independent kingdom in 1866.

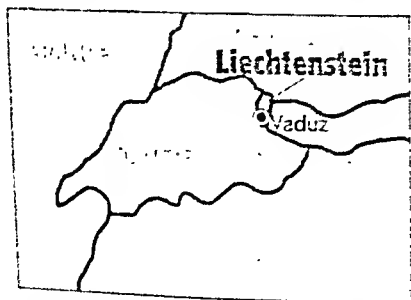
Foreign workers comprise a third of the population: Many international corporations have headquarters in Liechtenstein.

The country has remained neutral and undamaged in all European wars since 1868, when the army was abolished. In 1984, male voters granted women the right to vote.

Economy: The economy is mainly industrial. Cattle-rearing is highly developed. The country's farming population has gone down from 70% to 2% in about 60 years. Chief industries are machines and tools, textiles, foodstuffs, leather-ware, chemicals, furniture and ceramics.

101. Liechtenstein

(Principality of Liechtenstein) Fürstentum Liechtenstein



Capital: Vaduz; Other Large Cities: Sackaan; **Area:** 160 sq.km; **Population:** 33,987; **Languages:** German; **Religions:** Roman Catholic-76.2%, Protestant-7%, unknown-10.6%, oth-

102. Lithuania

(Republic of Lithuania) Lietuvos Respublika



Capital: Vilnius (Vilna); Other Large Cities: Kaunas, Klaipeda; **Area:** 65,200 sq.km; **Population:** 3,585,906; **Languages:** Lithuanian; **Religions:** Roman Catholic (primarily), Lutheran, Russian Orthodox, Protestant, Evangelical

Christian Baptist, Muslim, Jewish; Literacy: 99.6%; Life Expectancy: 74.2; Currency: Litas (\$1=2.73); p.c.i: \$ 13,700; Date of Independence: 11th March, 1990.

Government Type: Parliamentary Democracy; **President:** Valdas Adamkus; **PM:** Zigmas Balcius.

History: Lithuania seceded from Soviet Union and attained independence in August, 1991. Earlier in March 1990, Lithuania had formally declared its independence but USSR defeated it by cutting off supplies and by other manoeuvres. It is bordered by Latvia, Belarus, Poland and Russia.

Russia withdrew its last soldier from Lithuania on Aug. 31, 1993.

The country, which was mainly agricultural before 1940, has been considerably industrialised since. There is a privatisation programme. By Jan.'95, 5100 former state enterprises had been sold.

Economy: Agriculture: Grain, potatoes, sugar-beet, vegetables, meat, milk and eggs. Natural resources: Forests cover 1,554,000 hectares, 70% of which consist of conifers, especially pines. Peat reserves total 4,000 m.cu. metres. Industry: Heavy engineering, ship-building, building material industries, electronic goods, chemicals, paper, leather, sugar and garments.

Mission In India: Hon. Consulate of the Republic of Lithuania, Mohan House, Zamrudpur Community Centre, Kailash Colony Extn., New Delhi-110 048. Tel: 26433135; Fax: 26460191.

103. Luxembourg

(Grand Duchy of Luxembourg) Grand-Duché de Luxembourg

Capital: Luxembourg; **Other Large Cities:** Petange, Sanem; **Area:** 2586 sq. km.; **Population:** 474,413; **Languages:** French, German, English and Luxembourgish; **Religions:** Roman Catholic-87%, Protestants, Jews and Muslims-13%; **Literacy:** 100%; **Life Expect-**

ancy: 78.89; **Currency:** Euro (\$1=0.79); **p.c.i:** \$55,600; **Date of Independence:** 1839.

Government Type: Constitutional Monarchy; **Head of State:** Grand Duke Henri; **Head of Govt.:** Jean-Claude Juncker.

History: Luxembourg is a small state lying in between Germany, Belgium and France. It is a Grand Duchy.

Its independence was confirmed by the Treaty of London in 1867. Luxembourg is a member of the European Union.

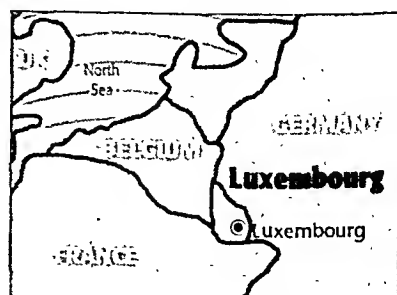
Economy: A member of the European Economic Community, the Benelux, the European Steel and Coal Community and the Euratom, Luxembourg is a highly industrialised state. Its iron deposits form the basis of a big steel industry, which accounts for 70 per cent of the country's exports. Other industries: Chemicals, beer, tires, tobacco, metal products, cement. Agriculture occupies only 10 per cent of the population. Chief crops: Corn, wine and dairy products.

Recent Events: Luxembourg voted by 57% to 43% to approve the EU constitution.

Mission in India: Embassy of the Grand Duchy of Luxembourg, 730, Gadaipur Road, Branch Post Office Gadaipur, New Delhi-110030. Tel: 26801954. Fax: 26801971.

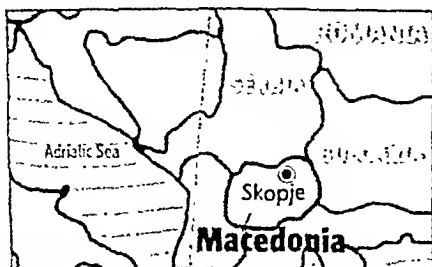
E-mail: paulsteinmetz@internat.lu

Indian Mission in Luxembourg: Honorary Consulate General of India, "Cabinet d'Avocats" Jim Penning, 31, Grand-Rue, B.P. 282, L-2012, Luxembourg. Tel: 00-352-473886; Fax: 00-352-222584.



104. Macedonia

(Former Yugoslav Republic of Macedonia)
Republika Makedonija



Capital: Skopje; Other Large Cities: Bitola, Tetovo; Area: 25,713 sq. km.; Population: 2,050,554; Languages: Macedonian; Religions: Macedonian Orthodox-64.7%, other Christian-0.37%, Muslim-33.3%, others-1%; Literacy: 96.1%; Life Expectancy: 73.97; Currency: Denar (\$1 = 48.61); p.c.i: \$ 6,450; Date of Independence: 8th September, 1991.

Government Type: Parliamentary Democracy; President: Branko Crvenkovski; PM: Vlado Buckovski.

Ethnic breakdown: Macedonians - 65%; Albanians-22%; others (including Gypsies) - 13%. A third of the population is believed to be Muslim and the rest Orthodox Christians.

History: Former Yugoslavia's poorest republic, Macedonia is land-locked and is bounded by Bulgaria, Greece, Albania and Yugoslavia. On September 8, 1991 it voted to declare independence but EC and US refused to give recognition owing to Greek objections to its use of the name Macedonia. Greeks say Macedonia's name implies territorial claims on the northern Greek province of Macedonia. Macedonia has adamantly opposed a name change. Claims to the historical Macedonian territory have long been a source of contention with Bulgaria and Greece.

Macedonia became the 181st member of the UN on April 8, 1993 under the temporary name 'the former Yugoslav republic of Macedonia'. Yugoslavia and Macedonia established diplomatic ties in April, 1995.

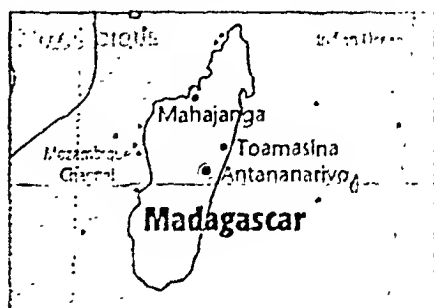
Macedonia's resources were under tremendous strain in 1999 on account of the flow of Kosovan refugees.

Economy: Agricultural products: Wheat, maize, cotton, timber, livestock. Industry: Electricity, lignite, steel, cement.

Recent Events: President Crvenkovski asked Nikolo Gruevski, leader of the centre-right VMRO-DPMNE party, to form a new government on 28 July, 2006.

105. Madagascar

(Democratic Republic of Madagascar)
Republika Demokratika Malagasy



Capital: Antananarivo; Other Large Cities: Toamasina, Mahajanga; Area: 587,341 sq km; Population: 18,595,469; Languages: Malagasy and French; Religions: indigenous beliefs-52%, Christian-41% and Muslim-7%; Literacy: 68.9%; Life Expectancy: 57.34; Currency: Ariary (\$1 = 2173); p.c.i: \$ 900; Date of Independence: 26th June, 1960

Government Type: Republic; President: Marc Ravalomanana; PM: Jacques Sylla

History: Madagascar, the world's fourth-largest island, lies in the Indian Ocean, off the south-east coast of Africa. It was discovered in 1500 by the Portuguese Diego Diaz, became a French colony in 1896, and an Overseas Territory in 1946. In 1958, it proclaimed the autonomous public within the French Community and independence on

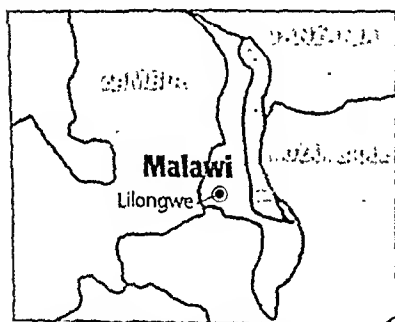
Economy: The economy is essentially agricultural. Rice is the staple food and coffee the chief export (45%). Cassava, fruits, tobacco, cloves and vanilla are also cultivated. Large herds of cattle are raised. Mineral deposits include graphite, mica, nickel and copper. World Bank reckons that half the population is malnourished. **Industry:** Food processing, textiles.

Indian Mission in Madagascar: Embassy of India, 4, Lalana Rajaonson Emile, Tsaralalanaa, Post Box No. 1787, Antananarivo, Madagascar. Tel: 00-261-20-2233790, 2262729; Fax: 00-261-20-233790, 222729.

E-mail: indembmd@bow.dts.mg

106. Malawi

(Republic of Malawi)



Capital: Lilongwe; **Other Large Cities:** Blantyre, Mzuzu; **Area:** 118,784 sq.km; **Population:** 13,013,926; **Languages:** English, Chichewa, Lomwe, Yao; **Religions:** Protestant-55%, Roman Catholic-20%, Muslim-20%, indigenous beliefs-3%, others-2%; **Literacy:** 62.7%; **Life Expectancy:** 41.7; **Currency:** Kwacha (\$1=139.15); **p.c.i:** \$ 600; **Date of Independence:** 6th July, 1964.

Government Type: Republic; **Head of State & Govt. (President):** Bingu wa Mutharika.

History: Malawi in south-east Africa is bounded by Tanzania, Mozambique and Zambia. Lake Malawi, formerly Lake Nyasa, the third largest lake in Africa, lies on its east-

ern side. This land of lakes and mountains has infinite beauty and is considered a tourists' paradise. Malawi, formerly the British protectorate Nyasaland, (until 1907 British Central Africa) became independent in 1964 and a republic in 1966.

Dr. Hastings Kamuzu Banda's (President since 1971) autocratic system was rejected by Malawians in 1994. President Muluzi was re-elected for a final five-year term in June, '99.

Economy: Poor in resources, Malawi's agriculture is still at subsistence level. Maize is the main food crop. The chief cash crops are tea, tobacco, sugar and cotton. **Industry:** Textiles, sugar and cement.

Mission in India: High Commission of the Republic of Malawi stationed at Nairobi.

Honorary Consulate of the Republic of Malawi, 40, Ashoka Avenue, Sainik Farm, Khanpur Gate, New Delhi-110 062. Tel: 26518527.

E-mail: stkilachand@vsnl.net

107. Malaysia



Capital: Kuala Lumpur; **Other Large Cities:** Pinang, Ipoh; **Area:** 330,434 sq.km; **Population:** 24,385,858; **Languages:** Malay, English, Chinese, Tamil; **Religions:** Muslim, Buddhist, Daoist, Hindu, Christian, Sikh, Note: in addition, Shamanism is practised in east Malaysia; **Literacy:** 88.7%; **Life Expectancy:** 72.5; **Currency:** Ringgit (\$1=3.64); **p.c.i:** \$ 12,100; **Date of Independence:** 31st August, 1957.

Government Type: Constitutional Monarchy; **Supreme Head of State:** King Tuanku

Syed Sirajuddin Syed Putra Jamalullail; PM: Abdullah bin Ahmad Badawi

Malaysia, at the southern end of the Malay Peninsula in south-east Asia, is a federation of 13 states comprising Johor, Kedah, Kelantan, Melakaa, Negeri Sembilan, Pahang, Perak, Perlis, Pulau Pinang, Sabah, Sarawak, Selangor and Terengganu.

History: Malaysia was created in 1963. It included Malaya, which had become independent in 1957, plus the formerly-British Singapore, Sabah and Sarawak. Singapore was separated in 1965.

Economy: Natural resources are abundant. Malaysia is one of the world's largest producers of rubber, tin and palm oil. Malaysia is also the world's leading exporter of pepper and timber. Other crops are rice, coconut, vegetables, pineapples, coffee, tea, cocoa, etc.

Iron ore, gold, ilmenite and bauxite are the major mineral resources. The petroleum industry in Malaysia is becoming significantly important to the economy of the nation. Leading industries are food products, tobacco, wood products, electrical goods, textiles, chemical products, construction goods, non-metallic products, transport equipment and the processing of agricultural products from estates (eg. rubber, palm oil). Industrialisation has been speeded up with foreign investment. P.M. Dr.Mahathir is the chief architect of the country's privatisation programme. Service contributes 48% of GDP.

'Peninsular Malaysia' comprises the 11 States of Johor, Pahang, Negeri Sembilan, Selangor, Perak, Kedah, Perlis, Kelantan, Trengganu, Penang and Melaka.

Recent Events: In April 2006, Malaysia shelved the construction of a controversial bridge to Singapore. The proposed link was the subject of a dispute between the two countries.

Mission In India: High Commission for Malaysia, 50-M, Satya Marg, Chanakyapuri, New Delhi - 110021. Tel: 26111291-93 & 26111297; Fax: 91-11-26881538.

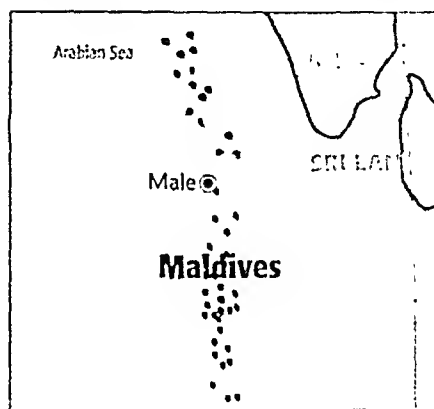
E-mail: mwndelhi@del2.vsnl.net.in

Indian Mission in Malaysia: High Commission of India, No.2, Jalan Taman Duta, Off Jlan Duta, 50480 Kuala Lumpur, (or) P.O. Box No. 10059 G.P.O., 50704, Kuala Lumpur. Tel: 00-603-2533504, 2533509, 2533510, 2433511; Fax: 00-603-2533507, 2525826.

E-mail: hoc@po.jaring.my / dhc002@po.jaring.my/ highcomm@po.jaring.my(H.C.)

108. Maldives

(Republic of the Maldives) Divedhi Raajjeyge Jumburiya



Capital: Male, **Area:** 298 sq km, **Population:** 359,008; **Languages:** Divehi (Sinhalese dialect); **Religions:** Sunny Muslim; **Literacy:** 97.2%; **Life Expectancy:** 64 41; **Currency:** Rufiya (\$1=12 8), p.c.i: \$ 3,900; **Date of Independence:** 26th July, 1965

Government Type: Republic; **Head of State & Govt (President):** Maumoon Abdul Gayoom

The Republic of Maldives lying about 675 km south-west of Sri Lanka, consists of more than 1,200 small coral islands (159 inhabited) grouped in 19 atolls, in the Indian Ocean

History: Maldives, called the 'Lands Until April 1969, formerly elected Sultan as head of state

were placed under British protection, with internal self-government, in 1887. They became a republic in January 1953 but the sultanate was restored in February 1954. Maldives became fully independent, outside the Commonwealth, on 26 July 1965. Following a referendum, the country became a republic again in November 1968, with Ibrahim Nasir, Prime Minister since 1954, as President.

In 1956 the Maldivian and British Governments agreed to the establishment of a Royal Air Force staging post on Gan, an island in the southernmost atoll, Addu. In 1975 the British Government's decision to close the base and to evacuate British forces created a large commercial and military gap. In October 1977 President Nasir rejected an offer of an annual payment of US \$ 1 m. from the USSR to lease the former base on Gan, announcing that he would not lease the island for military purposes, nor lease it to a superpower.

In 1981 the President announced plans to establish an international business complex on Gan. By 1982 two garment factories were operational, and a third was under construction. Gan airport was declared international airport in 1988.

In March 1975 President Nasir dismissed the Prime Minister, Ahmed Zaki, and the post of Prime Minister was abolished. Maumoon Abdul Gayoom, Minister of Transport became President in November 1978.

An attempted coup took place in November, 1988. It was scotched with assistance from India.

Government: Legislative power is held by the unicameral Citizens' Council (Majilis), with 48 members. The country has 20 administrative districts. There are no political parties. Maldives is divided into the capital and 19 other administrative districts, each under an appointed governor (verin) assisted by local chiefs (katheebum), who are also appointed.

Economy: Most of the country's population live on tiny coral islands in scattered atolls. These islanders are generally outside a money economy, subsisting by fishing and collecting coconuts. Arable land is minimal. Virtually all the principal staple foods have to be imported.

The islands are covered with coconut palms and yield millet, cassava, yams, melons and other tropical fruit as well as coconut produce. The main industries are fishing, tourism, shipping, reedware, lacquer-work, coconut processing and garment manufacturing. The GDP has grown at an annual rate of around 6% from 1992-93, fuelled mainly by an expansion and growth of tourism industry (an average of 10% annually) and the modernisation of the fisheries sector. Bonito ('Maldivian fish') is the main export commodity and source of foreign exchange after tourism. White sandy beaches and multi-coloured coral formations are chief tourist attractions.

Mission in India: High Commission for Maldives stationed at Colombo.

Honorary Consulate of the Republic of Maldives, 702-703, Deepali Building, 92, Nehru Place, New Delhi-110 019. Tel: +91-11 26229336; Fax: +91 11 26481352.

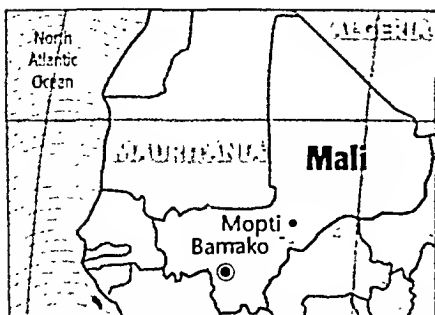
E-mail: ashishs78@yahoo.com

Indian Mission in Maldives: High Commission of India, Athireege Aage, Ameeru Ahmed Magu, Herveiru, Male, Republic of Maldives. Tel: 00-960-323014/16; Fax: 00-960-324778.

E-mail: hicomal1@dhivehinet.net.mv

109. Mali

(Republic of Mali) Republique du Mali
Capital: Bamako; **Other Large Cities:** Segou, Mopti; **Area:** 1,240,192 sq.km; **Population:** 11,716,829; **Languages:** French (official), Bambara and other African languages; **Religions:** Muslim-90%, indigenous beliefs-9%, Christian-1%; **Literacy:** 46.4%; **Life Expect-**



ancy:49; Currency: CFA Franc (\$1=518.98); p.c.l: \$1,200; Date of Independence: 22nd September, 1960.

Government Type: Republic; **President:** Amadou Toumani Toure; **PM:** Ousmane Issoufi Maiga.

History: Mali is a land-locked state in West Africa. It was proclaimed an independent republic in 1960.

The area was part of the great Mali Empire, until the 15th century. In 1904, it became a French colony named French Sudan and in 1946 part of the French Union. In June 1960 it became independent and was named the Sudanese Republic. The Sudanese Republic federated with Senegal in the Mali Federation that year. Senegal then withdrew from this and the Sudanese Republic changed its name to the Republic of Mali on Sept. 22, 1960. Amadou Toumani Traore was in power from 1968 to 1991.

Agreements were signed with Tuareg insurgents in the north in '91, '92 and '94. A special administration for the Tuareg north was provided in 1992.

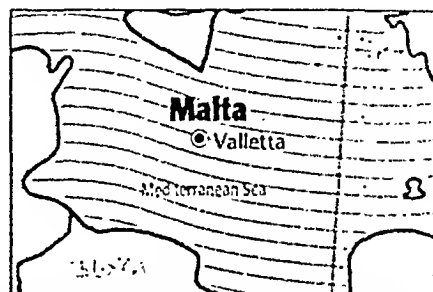
In Jan. '99, ex-President Traore was condemned to death for economic crimes.

Economy: The country is poor in natural resources. Only about 20 per cent of the land is cultivable. The main crops are rice, millet, groundnuts and cotton. Livestock-raising is important and the processing of hides and skins remains the chief industry. There is extensive river-fishing and good export trade in dried and smoked fish.

Recent Events: In May 2006, visiting French Interior Minister Nicolas Sarkozy faced a hostile reception from protesters accusing him of racism over the tough immigration bill he introduced in parliament. In June, the government signed an Algerian-brokered peace deal with Tuareg rebels seeking greater autonomy for their northern desert region.

110. Malta

(Republika Ta' Malta)



Capital: Valletta; **Other Large Cities:** Birkirkara, Harum and Sliemna; **Area:** 316 sq. km; **Population:** 400,214; **Languages:** Maltese and English; **Religions:** Roman Catholic-98%; **Literacy:** 92.8%; **Life Expectancy:** 79.01; **Currency:** Maltese Lira (\$1=0.339); p.c.l: \$19,900; **Date of Independence:** 21st September, 1964.

Government Type: Republic; **President:** Eddie Fenech Adami; **PM:** Lawrence Gonzi

History: Malta is an island in the central Mediterranean Sea, 95 km from Sicily and about 290 km from the African coast. This state also includes the adjoining islands of Gozo and Comino. Malta became independent in 1964 and a republic in 1974. Malta joined the European Union on May 1, 2004.

Economy: The rocky country has no natural resources. Textiles, footwear, rubber products and plastics are exported. Ship repair and ship building are major economic activities. Agricultural products include citrus, onions, potatoes and

ism, however, remains the island's major industry.

Mission In India: High Commission for Malta stationed at Malta .

Honorary Consulate of the Republic of Malta. 1, Hailey Road, New Delhi-110 001. Tel: 23329090; Fax: 23329393.

E-mail: maltaconsulate@europemail.com

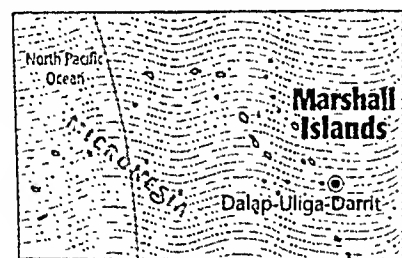
Web: www.kathpalia.org/malta

Indian Mission in Malta: High Commission of India, Regional Road, St. Julianas, SGN 02, Malta. Tel: 00-356-344302/03; Fax: 00-356-344259.

E-mail: hcimalta@mail.link.net.mt

111. Marshall Islands

(Republic of the Marshall Islands)



Capital: Dalap-Uliga-Darrit (on Majuro atoll); **Area:** 181 sq.km; **Population:** 60,422; **Languages:** Marshallese, English, other indigenous languages and Japanese; **Religions:** Christian (Mostly Protestant); **Literacy:** 93.7%; **Life Expectancy:** 70.31; **Currency:** Dollar (US); p.c.l: \$ 2,300 ; **Date of Independence:** 21st October, 1986.

Government Type: Republic; **President:** Kessai Note.

History: The Republic of Marshall Islands consists of two island/atoll chains, in the Pacific Ocean, the Ratak (sunrise) Chain and the Ralik (sunset) Chain, totalling 31 atolls. Each atoll is a cluster of several small islands circling a lagoon. Kwajalein is the largest of the islets, which number about a hundred.

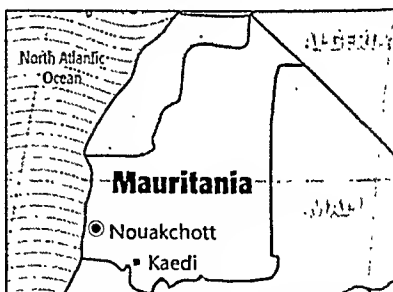
The capital Majuro is about 3200 kms south-west of Honolulu. About 92% of the population are Marshallese, a Micronesian people.

Marshall Islands was a Trusteeship territory of the United States until Oct. 1986. The Islands became a full U.N. member state in Sept., 1991. The USA controls defence policy and provides financial support. Kwajalein, one of the main atolls in the western chain, is a U.S. missile-testing range and air field.

Economy: Agriculture and tourism are mainstays. Crops: Coconuts, tomatoes, melons and bread fruit. Minerals: Phosphate deposits are mined on Ailinglaplap atoll.

112. Mauritania

(Islamic Republic of Mauritania) Republi-que Islamique de Mauritanie



Capital: Nouakchott; **Other Large Cities:** Nouadhibou, Kaedi; **Area:** 1,030,700 sq.km; **Population:** 3,177,388; **Languages:** Arabic, French and Hassanya Arabic, Wolof, Pulaar, and Soninke; **Religions:** Muslim-100%; **Literacy:** 41.7%; **Life Expectancy:** 53.12; **Currency:** Ouguiya (\$1=271.3); p.c.l: \$ 2,200; **Date of Independence:** 28th November, 1960.

Government Type: Islamic Republic; **President:** Col.Ely Ould Mohamed Vall; **PM:** Sidi Mohamed Ould Boubakar.

History: The Islamic Republic of Mauritania is on the Atlantic coast of the West African bulge.

This former French overseas territory became autonomous in 1958 and fully independent on Nov. 28, 1960. Opposition parties were legalised and a new constitution approved in 1991.

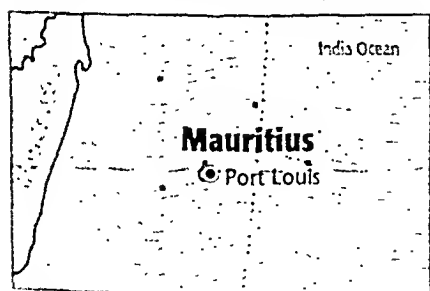
Mauritania signed a peace treaty with the Polisario Front in 1980, and renounced sovereignty over its share of Western Sahara.

Economy: As much as 47% of the total area of the country is desert. The population is traditionally nomadic, rearing cattle and sheep. Main crops: dates, grain. Fishing is important. Deposits of iron and copper are being exploited. Oil prospecting is going on. **Industry:** Fish processing and iron mining.

Recent Events: Soldiers overthrew Mauritania's president, Maouiya Ould Sid Ahmed Taya, who had been attending King Fahd's funeral, and set up a military council to end what is called a "military regime".

113. Mauritius

Capital: Port Louis; **Other Large Cities :**



Curepipe, Quatre Bornes; Area: 2040 sq.km; **Population:** 1,240,827; **Languages:** English, French, Creole and Hindustani; **Religions:** Hindu-52%, Christian-28.3% (Roman Catholic-26%, Protestant-2.3%), Muslim-16.6%, others-3.1%; **Literacy:** 85.6%; **Life Expectancy:** 72.63; **Currency:** Rupee (\$1=30.78); **p.c.i.:** \$ 13,100; **Date of Independence:** 12th March, 1968.

Government Type: Parliamentary Democ-

racy; President: Anerood Jugnauth; **PM:** Navinchandra Ramgoolam.

History: Mauritius, a volcanic island nearly surrounded by coral reefs, lies about 800 km east of Madagascar in the Indian Ocean. Settled by the Dutch in 1638. The French who took over in 1721, brought African slaves. The British who ruled from 1810 to 1968 brought Indian workers for the sugar plantations. The Indian majority in Mauritius are descendants of these workers. **Ethnic groups:** Indo-Mauritian 68%, Creole 27%.

Became an independent state on Mar.12, 1968. Formally severed its association with the British crown and became a republic in 1992.

About 37,000 people live in Rodrigues, a small dependency.

Economy: Sugarcane is the predominant crop. The main secondary crops are tea, tobacco and potatoes. Tourism is a highly developed industry. (500,000 tourists a year). Other industries: rum, textiles, processing of sugar and tea. Mauritius is one of world's leading exporters of woollen knitwear.

Recent Events: In April 2006, one hundred former residents of the Chagos Archipelago-claimed by Mauritius - made a return visit nearly 40 years after being evicted by Britain to make way for a US military base on the island of Diego Garcia. Their legal battle with Britain continues.

Mission In India: Mauritius High Commission, EP-41 Jesus & Mary Marg, Chanakyapuri, New Delhi 110021 Tel: 2410 2161-63; Fax: 2410 2194

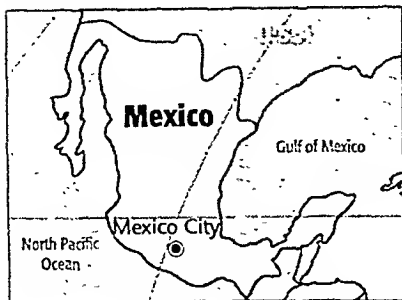
E-mail: mhcmd@bol.net.in

Indian Mission in Mauritius: High Commission of India, 6th Floor, Life Insurance Corporation of India Building, President John Kennedy Street P O Box No. 162, Port Louis, Mauritius. Tel. 00-230-2083775/6, 2088831, Fax: 00-230-2086859, 2088891.

E-mail: hicombc@

114. Mexico

(United Mexican States) Estados Unidos Mexicanos



Capital: Mexico City; **Other Large Cities:** Monterrey, Puebla; **Area:** 1,972,547 sq.km; **Population:** 107,449,525; **Languages:** Spanish, Amerindian languages; **Religions:** Nominally Roman Catholic-89%, Protestant-6%, others-5%; **Literacy:** 92.2%; **Life Expectancy:** 72.63; **Currency:** New Peso (\$1=11.40) (Controlled rate); **p.c.i:** \$ 10,000; **Date of Independence:** 24th September, 1821.

Government Type: Federal Republic; **President & PM:** Vicente Fox Quesada.

History: A federal republic of middle America, Mexico became an independent state in 1821 and a republic in 1823.

Mexico is the only Latin American country not to have a military coup in the post-war period.

Guerrillas of the Zapatista National Liberation Army launched an uprising on Jan.1, '94 in southern Mexico. A tentative peace accord was reached in March.

Economy: Mexico is not well suited for agriculture so it is obliged to import food. The important agricultural products are maize, rice, wheat, sugar, coffee and cotton. Sea fishing is also important as an occupation. Mexico is the world's leading producer of silver, sulphur and fluorite. Other minerals include coal, zinc, lead, manganese, bauxite and uranium. In recent years, Mexico has become one of the main producers and ex-

porters of petroleum. Main industries: Steel, chemicals, electric goods, textiles, rubber, tourism. In the 1980's Mexico experienced a major economic crisis resulting from inflation, collapse of oil prices and severe unemployment. The devaluation of the peso in 1995 sparked an exodus of capital. A collapse of the currency was prevented by pledges of foreign aid and an austerity plan.

Institutional Revolutionary Party (PRI) was defeated for the first time in 71 years in July 2000, and Vicente Fox, the Opposition candidate was elected president.

Recent Events: In February 2006, a federal post of special prosecutor was created to tackle violent crime against women. Mexico had been criticised by the UN and rights groups over the unsolved murders of more than 300 women over 12 years in the border city of Ciudad Juarez. In July, conservative candidate Felipe Calderon was declared the winner of presidential elections with a razor-thin majority over his leftist rival, Andres Manuel Lopez Obrador. Obrador challenged the result with mass street protests.

Mission In India: Embassy of Mexico, 20 D, Sardar Patel Marg, Chanakyapuri, New Delhi-110 021. Tel: 24107182-83; Fax: 91 11-24107185.

e-mail: embamexindia@mantronline.com; Web: www.embamexindia.org

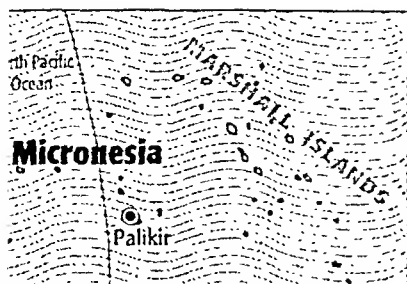
Indian Mission in Mexico: Embassy of India, Avenida Musset 325, Colonia Polanco C.P. 11550, Mexico D.F. Tel: 00-525 5311050; Fax: 00-525-2542349.

E-mail: indembmx@prodigy.net.mx

115. Micronesia

(Federated States of Micronesia)

Capital: Palikir; **Other Large Cities:** Weno, Tofol; **Area:** 702 sq.km.; **Population:** 108,004; **Languages:** English and local languages; **Religions:** Roman Catholic-50%, Protestant-47%; **Literacy:** 89%; **Life Expectancy:** 70.05.



currency: US Dollar; p.c.i: \$ 3,900; Date of Independence: 3rd November, 1986.

Government Type: Constitutional Government; President: Joseph J. Urusemal

History: The Federated States of Micronesia (FSM), formerly known as Caroline Islands, extends across the 1,800 mile-long Caroline archipelago in the Western Pacific. The states of the FSM are Pohnpei, Kosrae, Truk and Yap. Each state consists of several islands, except for Kosrae, a single island. The islands, 17 in all, vary geologically from high, mountainous islands to low, coral atolls.

The FSM, which came into being on May 3, 1979 was a Trusteeship Territory of the United States. In November 1986 USA entered into a Compact of Free Association with it. Became a full UN member state on Sept. 7, 1991. The USA controls defence and provides financial support.

Economy: Crops: Tropical fruits, vegetables, etc. Industry: Tourism and fishing.

Mission In India: Embassy of the Federated State of Micronesia stationed at Tokyo.



65.65; Currency: The Leu (\$1=13.375); p.c.i: \$ 1,800; Date of Independence: 27th August, 1991.

Government Type: Republic; President: Valdimir Voronin; PM: Vasile Tarlev.

History: A former Soviet republic that became independent in Dec., 1991

Moldova (Moldavia until 1990) has Ukraine and Romania as neighbours. The region was taken from Romania in 1940, the people speak Romanian. In a referendum in March, 1994, Moldovans voted to remain independent, and against any union with Romania. Moldova is a fertile black earth plain. It contained about one-fourth of the former USSR's vineyards.

In May, '97, leaders of Moldova and a break-away region Transnistria (which approved a separatist constitution in 1995) signed an agreement to keep Moldova a single state.

Economy: Agriculture: Grain, sugarbeet, vegetables, fruit, grapes. Industry: Wire-making, tobacco, tanning, wood-processing, textiles, metallurgy, dairy, TV, fridge, washing machines.

116. Moldova

(Republic of Moldova) Republica Moldoveneasca

Capital: Chisinau (formerly Kishinev); **Other Large Cities:** Tiraspol, Balti; **Area:** 33,700 sq km; **Population:** 4,466,716; **Languages:** Romanian, Ukrainian; **Religions:** Eastern Orthodox 93%, Jewish 1.5%, Baptist and others 0.5%; **Literacy:** 99.1%; **Life Expectancy**

117. Monaco

Principality of Monaco; **Capital:** Monaco; **Other Large Cities:** ... **Area:** 96 sq km; **Population:** ... **Languages:** French, ... **Religions:** Roman Catholic ... **Life Expectancy:** ...



(\$1=0.79); p.c.i: \$ 27,000; Date of Independence: 1419

Government Type: Constitutional Monarchy; **Head of State:** Prince Albert II; **Head of Govt:** Jean-Paul Proust.

History: Monaco is a sovereign principality on France's south-eastern Mediterranean coast. Of the resident population, 40% are French, 17% Italian and 5% British. Monaco is a member of the U.N.

Economy: The principality is a series of connected towns—Monaco-Ville, La Condamine, Fontvieille and Monte Carlo with its casinos, opera house, grand hotels, shops and villas.

Monaco is a fashionable pleasure resort visited by as many as 1.5 million tourists every year. Its main attractions are the casinos and its international motor sports—the Monte Carlo Rally and the Monaco Grand Prix. Tourism, gambling, and tobacco monopoly are its main sources of income.

There are a number of light industries, such as chemicals, plastics and precision instruments. There were 43 km. of roads in 1995. There is one policeman for every 60 residents.

Recent Events: Prince Rainier III passed away.

Mission In India: Hon. Consulate General of Monaco, DLF Centre, 9th Floor, Sansad Marg, New Delhi-110 001. Tel: 23719202-04 Fax: 23719233.

118. Mongolia

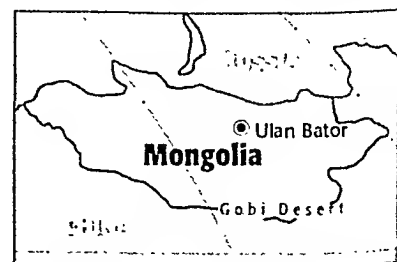
(Mongolian Republic) Mongol Uls
Capital: Ulan Bator; **Other Large Cities :**

Darhan, Erdenet; **Area:** 1,565,000 sq.km; **Population:** 2,832,224; **Languages:** Mongolian; **Religions:** Tibetan Buddhist Lamaism-96%, Muslim (primarily in the south-west), Shamanism and Christian-4%; **Literacy:** 97.8%; **Life Expectancy:** 64.89; **Currency:** Tugrik (\$1=1,170); p.c.i: \$ 1,900; **Date of Independence:** 11th July, 1921.

Government Type: Parliamentary; **President:** Nambaryn Enkhbayar; **PM:** Miegombyn Enkhbold.

History: The Mongolian People's Republic, formerly known as Outer Mongolia, lies in Central Asia with Russia to the north and China to the south, east and west. It is one of the world's oldest countries. Much of the Gobi desert falls within Mongolia. The great Mongol warrior Genghis Khan (1162-1227) founded the Mongol world empire. It became an independent state in 1921. Political opposition was legalised in 1990. In July, Communists won the first free elections to the legislature. The constitution of 1992 abolished the 'People's Democracy', introduced democratic institutions and a market economy and guaranteed freedom of speech. The second free election in 1996 resulted in the defeat of the Communist Party which had ruled Mongolia for over 70 years. A reformist democratic coalition (with 50 seats in the 76-seat Great Hural) came to power.

Economy: Mongolia has been changed from a nomadic culture to one of settled agriculture and growing industries with aid from former USSR and East European nations. Live-



stock-raising is the principal occupation and comprises horses, oxen, sheep, goats and camels. The herdsmen are organised in collectives. State farms practise large-scale agriculture (crops: grains). Minerals include coal, flourspar, tungsten, tin and copper. Industry: Food processing, textiles, chemicals and cement.

Mongolia won admission to the World Trade Organisation in July, 1996-the first transition economy of the old Soviet bloc to join the body as a new member.

Mongolia's former communist rulers won a landslide victory in Parliamentary elections in July, 2000.

Recent Events : In January 2006, coalition government headed by Tsakhiagiin Elbegdorj fell after the MPRP pulled out, blaming the leadership for slow economic growth.

Mission in India: Embassy of Mongolia, 34, Archbishop Makarios Marg, New Delhi-110003. Tel: 24631728, 24617989; Fax: 91-11-24633240. E-mail: mongemb@vsnl.net

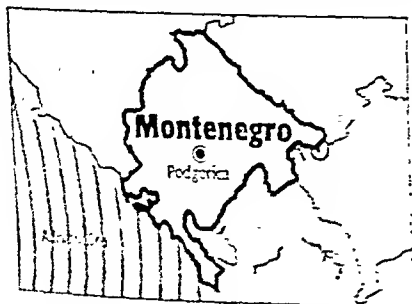
Web: mongemb.com

Indian Mission in Mongolia: Embassy of India, Zaluuchuudyn Urgun Chuluu 10, C.P.O. Box No. 691, Ulaanbaatar-13, Mongolia. Tel: 00-976-1-329522/24/28; Fax: 00-976-1-329532.

E-mail: indembmongolia@magicnet.mn

119. Montenegro

Capital: Podgorica (administrative capital); Cetinje (capital city); **Other Large Cities:**



Ulcinj, Tivat, Kolasin; Area: 14,026 sq.km; Population: 630,548; Languages: Serbian (Ijekavian dialect - official); Religions: Orthodox, Muslim, Roman Catholic; Literacy: 97%; Life Expectancy: 73; Currency: Euro; p.c.i: \$ 2,200; Date of Independence: 3rd June 2006.

Government Type: Republic; President: Filip Vujanovic; PM: Milo Djukanovic.

History: Montenegro, the world's newest nation, declared its independence on June 3, 2006. The country got its name (literally, "black mountain") from the dark mountain forests that cover the land. Some 60 per cent of the country is more than 1,000 metres high, with the tallest peak reaching to 2,522 metres. The mountains were a natural fortress that helped Montenegro maintain its independence until it suffered devastating losses in World War I. It became part of Serbia in 1918 and Yugoslavia in 1929.

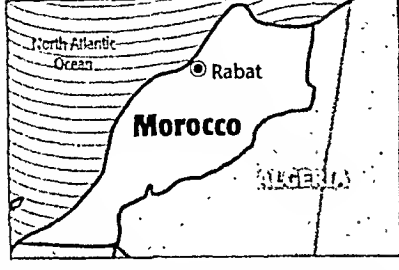
The people of Montenegro gained greater autonomy when the name Yugoslavia was discarded in favour of a democratic and federal country named Serbia and Montenegro. On May 21, 2006, 66.6 per cent of Montenegrans voted to secede from Serbia and become independent.

Economy: The economy of Montenegro is based on agriculture and animal husbandry. Important crops include cereals, tobacco, vegetables, grapes, figs and olives. The main industries are lumber milling, salt processing and tobacco processing.

Recent Events : In January 2006, at least 44 people died and nearly 200 were injured when a passenger train crashed into a ravine in Southern Montenegro. In May, Montenegro held independence referendum. Just over required 55% of voters said yes. In June, Montenegro declared independence. Serbia responded by declaring itself the independent sovereign successor state to the Union of Serbia and Montenegro.

120. Morocco

(Kingdom of Morocco) al-Mamlaka al-Maghrebia



Capital: Rabat; **Other Large Cities:** Fez, Marrakech; **Area:** 458,730 sq.km (excluding Western Saharan territory); **Population:** 33,241,259; **Languages:** Arabic, Berber; **Religions:** Muslim-98.7%, Christian-1.1%, Jewish-0.2%; **Literacy:** 51.7%; **Life Expectancy:** 70.94; **Currency:** Dirham (\$1=8.75); **p.c.i.:** \$4,200; **Date of Independence:** 2nd March, 1956.

Government Type: Constitutional Monarchy; **Head of State:** King Mohammed VI; **PM:** Driss Jettou.

History: The Kingdom of Morocco, which is a constitutional monarchy, is situated at the extreme northwest of Africa. The Atlas mountains stretch across Morocco.

Morocco recovered its political independence from France on March 2, 1956. The northern strip of Spanish Sahara was ceded by Spain in 1958, and in 1969, the former Spanish province of Ifni was returned to Morocco. In 1976, Morocco added 70,000 sq.km. of phosphate-rich land of former Spanish Sahara to its area.

Economy: Primarily an agricultural country, Morocco produces cereals, including barley, wheat, corn and fruits. Vineyards are abundant and dates form a regular crop. Live-stock raising is important and fishing is well-developed. About 500,000 Moroccans rely on fishing as their occupation. The most important mineral extracted is phosphate, of

which Morocco remains a world supplier. Other minerals are iron ore, coal, lead and manganese. **Industry:** Carpets, clothing, leather goods, mining, sugar, metallurgy, chemicals and tourism. Its foreign debt has made Morocco one of the most indebted countries in the world.

The dispute with Spain on the tiny island Perejil caused some tension in July but it subsided. King Mohammed VI married commoner and computer engineer Salma Bennami in July.

Mission In India: Embassy of the Kingdom of Morocco, 33 Archbishop Makarios Marg, New Delhi-110003. Tel: 24636920/21 & 24636924 (Visa); Fax: 24636925.

E-mail: sifamand@giasdl01.vsnl.net.in

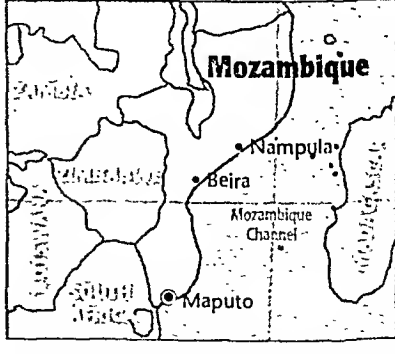
Web: www.moroccoembindia.com

Indian Mission in Morocco: Embassy of India, 13, Charia Michlifin, Agdal, Rabat, Morocco. Tel: 00-212-3-7671339, 7675974/5; Fax: 00-212-3-7671269.

E-mail: india@maghrebnet.net.ma

121. Mozambique

(Republic of Mozambique) Republica de Mocambique



Capital: Maputo; **Other Large Cities:** Beira, Nampula; **Area:** 783,030 sq.km; **Population:** 19,686,505; **Languages:** Portuguese and

tu; Religions: Catholic-23.8%, Zionist Christian-17.5%, Muslim-17.8%, other-1.8%, none-23.1%; Literacy: 47.8%; Life Expectancy: 39.8; Currency: Metical (1=25733.7); p.c.i: \$ 1,200; Date of Independence: 25th June, 1975.

Government Type: Republic; President: Armando Guebuza; PM: Luisa Diogo.

History: Mozambique is the old Portuguese East Africa. Became independent on June 25, 1975, after 470 years of Portuguese colonial rule. Mozambique Channel of the Indian Ocean bounds it in the east. The majority of the population belongs to the Bantu tribe. The Zambezi is the largest of the 25 rivers that flow into the Indian Ocean.

In 1974, Frelimo (Front for the Liberation of Mozambique) took over local administration. The 1980's witnessed severe drought, famine, civil war and heavy loss of life. According to a study by Washington-based Population Crisis Committee, Mozambique was the place with the highest human suffering in 1992.

Agreement was reached in Oct. '92 between government and the rightist Renamo (Mozambican National Resistance Movement) guerrilla group for a ceasefire in their 15-year war, which killed more than 600,000, drove 1 million people into exile and left half the population in need of donated food. The treaty provided for all weapons to be handed over to UN. The UN presence ended in Jan. '95. Elections took place in 1994.

Economy: The economy is based on agriculture. The major cash crops are cashewnuts, sugar, cotton and sisal. Maize, bananas, rice, groundnuts, vegetables and coconuts are also grown. Considerable mineral resources exist although only coal, diamonds and bauxite are now exploited. Mozambique has two-thirds of the world's known reserves of tantalite and is the second largest producer of beryl. Industry: Steel, cement, engineering, textiles and petroleum products.

Missions in India: High Commission of the Republic of Mozambique, B-3/24, Vasant Vihar, New Delhi - 110057. Tel: 26156663/4; Fax: 26156665;

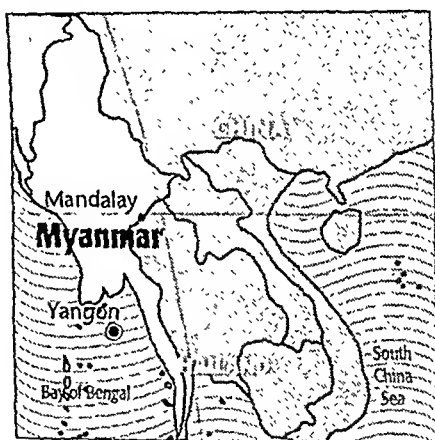
E-mail: hcmozind@hclinfinet.com

Indian Mission in Mozambique: High Commission of India, Avineda Kenneth Kaunda No. 167, P.O. Box No. 4751, Maputo, Mozambique. Tel: 00-258-1-492437, 490717; Fax: 00-258-1-492364.

E-mail: hcimpto@hcoi.uem.mz

122. Myanmar

(Union of Myanmar) Pyeidaungzu Myanma Naingangandaw



Capital: Seat of government moving to Naypyidaw, also known as Pyinmana, from Rangoon (Yangon); Other Large Cities : Mandalay, Bassein; Area: 676,553 sq.km; Population: 47,382,633; Languages: Burmese, Karen, Shan; Religions: Buddhist-89%, Christian-4% (Baptist-3%, Roman Catholic-1%), Muslim-4%, animist-1%, others-2%; Literacy: 85.3%; Life Expectancy: 60.97; Currency: Kyat. (\$1 = 6.42) p.c.i: \$ 1,700; Date of Independence: 4th January, 1948.

Government Type: Military Regime; President: Gen. Than Shwe; PM: Gen. Soe Win.

History: Originally a part of British India,

Union of Myanmar (Burma till May 1989) located between south and south-East Asia, on Bay of Bengal, became an independent country on January 4, 1948.

Gen. Ne Win who ruled Burma with an iron hand for 26 years was forced out in popular uprising in mid-1988. The Armed Forces set up a State Law and Order Restoration council (SLORC). In June 1990, in the first free elections in 30 years, the National League for Democracy won by a big majority but the army was reluctant to hand over power. Aung San Suu Kyi, the leading opposition leader and winner of Nobel Peace Prize, was kept under house arrest from 1989 to '95. The ruling junta has been promising a new Constitution for nearly seven years now but nothing concrete has emerged. Suu Kyi's activities are restricted by the government.

In 1987 UN bestowed the least developed country status on Burma, which was once the richest nation in SE Asia.

Myanmar joined the regional group BISTEC (Bangladesh, India, Sri Lanka, Thailand Economic Cooperation) in July '97, which then became BIMSTEC. In July, '97 ASEAN admitted Myanmar as a member.

Economy: Known as the "rice bowl of the Far East", Myanmar also grows sugarcane, peanuts, and beans. The chief minerals are petroleum, lead, tin, zinc, tungsten, copper, antimony, silver and gems. The rubies, sapphires and jade found in Myanmar are especially famous. Teakwood is exported.

Recent Events: Aung San Suu Kyi turned 60. UN called for her release • Former Prime Minister Khin Nyunt received a 44-year suspended sentence after being convicted on eight charges including bribery and corruption.

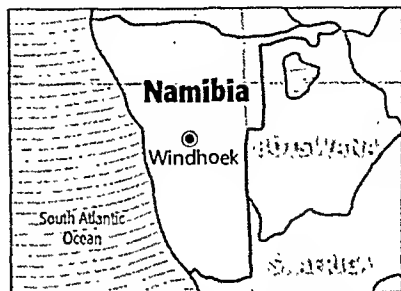
Mission In India: Embassy of the Union of Myanmar, 3/50F, Nyaya Marg, Chanakya-puri, New Delhi-110021. Tel: 26889007-08; Telefax: 26877942.

E-mail: myadeli@nda.vsnl.net.in Web: myandel.com

Indian Mission in Myanmar: Embassy of India, No. 545-547, Merchant Street, Post Box No. 751, Yangon, Myanmar. Tel: 00-95-1-240633, 243972, 282552; Fax: 00-95-1-254086/ 250164.

123. Namibia

Capital: Windhoek; **Area:** 826,700 sq.km;



Population: 2,044,147; **Languages:** English, Afrikaans, German, several indigenous languages; **Religions:** Christian-80-90% (at least Lutheran), Indigenous beliefs-10-20%; **Literacy:** 84%; **Life Expectancy:** 43.39; **Currency:** Dollar (\$1=6.846); **p.c.i:** \$ 7,000; **Date of Independence:** 21st March, 1990.

Government Type: Republic; **President:** Hifikepunye Pohamba; **PM:** Nahas Angula.

History: Namibia, formerly known as South West Africa, lies on the Atlantic coast of South Africa. After prolonged insurgency a peace accord was signed on 5th October, 1988 by Angola, Cuba and South Africa, and Namibia became a fully independent nation under the UN mandate on 21 March, 1990. The first general elections for a Constituent Assembly were held in November 1989 when SWAPO (South West Africa People's Organisation) which spearheaded the freedom struggle for 30 years was swept to power.

Walvis Bay and the off-shore islands were transferred to Namibian sovereignty on Feb. 28, 1994.

Economy: Diamonds are Namibia's most

valuable economic asset followed by copper, ranium, zinc, lead, germanium and manganese. Stock-breeding is important; cattle, sheep and goats abound. Fishing is a supplementary source of food and income. Food crops include corn, millet and sorghum. Industry: Canning, textiles, leather, dairy. GDP by major sectors: agriculture: 11%, industry 28%, and services 61%.

Population growth rate is 3% per annum. The country has a wide variety of tourist attractions mainly in the form of spectacular scenery and wildlife reserves. Walvis Bay and Luderitz are the two harbours.

Recent Events : In June 2006, a national anti-polio vaccination campaign was launched following the death of at least 12 people from the disease.

Mission in India: High Commission of the Republic of Namibia, A-2/6, Vasant Vihar, New Delhi-110057; Tel: 26140389/0890/4772; Fax: 26146120/26155482;

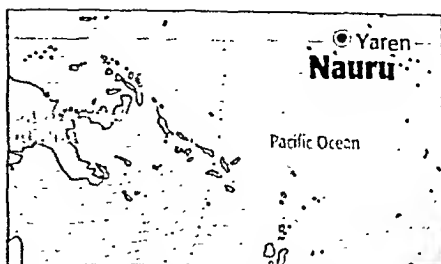
E-mail: nhcdelhi@del2.vsnl.net.in

Consulate: Mumbai: Tel: 56657272/56658027, Fax: 56658028,

E-mail: syamalgupta@tata.com

Indian Mission in Namibia: High Commission of India, 97, Nelson Mandela House, P.O. Box 1209, Windhoek, 9000, Namibia. Tel: 00-264-61-226037, 228433; Fax: 00-264-61-237320.

E-mail: hicomind@mweb.com.na



History: Nauru, a small coral island in the central Pacific, just 42 km. south of the equator is world's smallest republic. It is an oval-shaped coral island of approximately 20 km in length, surrounded by a reef which is exposed at low tide. Nauru became a republic on Jan. 31, 1968. It has an 18-member Parliament, elected on a 3-yearly basis.

About four-fifths of Nauru is phosphate-bearing rock, which accounts for 98% of its exports. It is estimated that the phosphate deposits will be exhausted by 2008.

The world's smallest democracy once had one of the highest per capita incomes in the world, but depleted phosphate mines and bad investments have left it economically bereft.

Mission in India: Honorary Consulate General of Nauru, S-327, Greater Kailash -1, New Delhi-110048. Tel: 26414744/26215780; Fax: 262157780.

E-mail: kartarbhalla@hotmail.com

124. Nauru

(Republic of Nauru) Naoro

Capital: Yaren district; **Area:** 21.1 sq.km;

Population: 13,287; **Languages:** English and

Nauruan; **Religions:** Christian (two-thirds

Protestant, one-third Roman Catholic); **Life**

Expectancy: 63.08; **Currency:** Australian Dol-

lar (\$1=1.35446); **p.c.i.:** \$ 5,000; **Date of In-**

dependence: 31st January, 1968.

Government Type: Republic; **Head of State**

& Govt (President): Ludwig Scotty.

125. Nepal

(Kingdom of Nepal) Nepal Adhirajya

Capital: Kathmandu; **Other Large Cities :**

Biratnagar, Lalitpur; **Area:** 147,181 sq.km.;

Population: 26,267,147; **Languages:** Nepali,

Maithiri, Bhojpur etc.; **Religions:** Hindu-

80.6%, Buddhist-10.7%, Muslim-4.2%,

Kirant-3.6%, others-0.9%. Nepal is the only

official Hindu state in the world; **Literacy:**

48.6%; **Life Expectancy:** 60.18; **Currency:**

Nepalese Rupee (US \$1=73.344); **p.c.i.:** \$

1,400; **Date of Independence:** 1768.



Government Type: Parliamentary Democracy; **Head of State:** King Gyanendra Bir Bikram Shah, **PM:** Girija Prasad Koirala.

The Kingdom of Nepal (Nepal Adhirajya) is a land-locked Asian country in the Himalaya mountain range. It is bounded on the north by Tibet, on the east by Sikkim and West Bengal, on the south and west by Bihar and Uttar Pradesh.

History: From 1846 to 1951 Nepal was virtually ruled by the Rana family, a member of which always held the office of prime minister, the succession being determined by special rules. The last Rana prime minister resigned in Nov. 1951. The 15 feudal chieftainships were integrated into the kingdom on 10 April 1961.

Following pro-democracy demonstrations on 16 April 1990 King Birendra dismissed the government and proclaimed the abolition of the panchayat system of nominated councils. On 9 November 1990, the King proclaimed a constitution by which he relinquished his absolute powers.

Under the constitution of 9 Nov. 1990 Nepal became a constitutional monarchy based on multi-party democracy. Parliament has 2 chambers: a 205-member House of Representatives (Pratinidhi Sabha), of which 10 members are nominated by the king.

The country is administratively divided into 14 zones, subdivided into 75 districts and over 3,500 villages.

Economy: Nepal is among the poorest and least developed countries in the world with

nearly half of its population living below the poverty line. Agriculture is the mainstay of the economy, providing a livelihood for over 80% of the population and accounting for 41% of GDP. Textile and carpet production, accounting for about 80% of foreign exchange earnings in recent years, contracted significantly in 2001 due to the world economic slump and pressures by Maoist insurgents on factory owners and workers.

Industry contributes about 22% of Nepal's GDP. Its major trading partner is India. Principal exports are food grains, jute, timber, oilseeds, ghee (clarified butter), potatoes, medicinal herbs, skins and cattle. The chief imports are textiles, cigarettes, salt, petrol and kerosene, sugar, machinery, medicines, boots and shoes, paper, cement, iron, steel and tea.

Tourism is the second largest industry. It is being developed by the construction of new tourist centres in the Kathmandu valley. Regular air services link Kathmandu with Pokhara Lake. Major tourist attractions include Lumbini, the birthplace of Buddha, and the Himalaya mountain range including Mount Everest, the world's highest peak. About 30 per cent of tourists are from India.

Government has a poverty reduction scheme whereby poverty is to be brought down to 10% in the 12th plan.

In Feb. '96, India and Nepal signed two agreements including an initiative for sharing of water and electricity from the Mahakali river.

King Birendra (brother of King Gyanendra), Queen Aishwarya and six other members of the royal family were assassinated on June 1, 2001.

Recent Events: In April 2006, an opposition alliance called off weeks of strikes and protests against the direct rule of the king after the monarch agreed to reinstate parliament. G.P. Koirala was appointed prime minister. Maoist rebels called a three-month ceasefire. In May, parliament voted unani-

mously to curtail the king's political powers. Rebel leader Prachanda and PM Koirala held talks - the first such meeting between the two sides - and agreed that the Maoists should be brought into an interim government.

Mission In India: Royal Nepalese Embassy, Barakhamba Road, New Delhi - 110001. Tel: 23329969, 23329218; Fax: 23326857, 3329647.

E-mail: ramjanki@del3.vsnl.net.in

Indian Mission In Nepal: Embassy of India, Lain Chaur, Post Box No. 292, Kathmandu, Nepal. Tel: 00-977-1-410900; Fax: 00-977-1-413132, 420130.

E-mail: indemb@mos.com.np

126. The Netherlands

(Kingdom of the Netherlands) Koninkrijk der Nederlanden



Capital: Amsterdam (Seat of Govt: The Hague); **Other Large Cities :** Rotterdam, Utrecht; **Area:** 41,160 sq.km; **Population:** 16,491,461; **Languages:** Dutch; **Religions:** Dutch Reformed-13%, Calvinist-7%, Muslim-5.5%, others-2.5%, none-41%; **Literacy:** 99%; **Life Expectancy:** 78.96; **Currency:** Euro (\$1=0.79); **p.c.i:** \$ 30,500; **Date of Independence:** 1579.

Government Type: Constitutional Monarchy; **Head of State:** Queen Beatrix Wilhelmina Amgard; **PM:** Jan Peter Balkenende.

The Kingdom of the Netherlands in North West Europe, on North Sea comprises the

Netherlands and Antilles. The country is plainland with an average height of 11 m. above sea-level. Much of the land, however, is below sea-level and is protected by dykes, which extend to some 2400 km. Netherlands is a member of the European Union.

Economy: The Netherlands is a small, densely populated and highly developed country. Agriculture has been mechanised and developed. Crops: Grains, potatoes, sugarbeets, fruits, flowers. Foodstuffs form the largest industrial sector. Dairy products account for one-quarter of exports. Other major industries include chemicals, metallurgy, machinery, electrical goods and tourism. Netherlands is one of the world's 10 leading exporting countries. Service sector contributes 71% of GDP, industry 26% and agriculture and fisheries 3%. Amsterdam is famous as a world centre for diamonds, precious metals and art treasures. Rotterdam, along the Rhine, handles the most cargo of any ocean port in the world. The Netherlands attracts 5m. tourists every year.

Recent Events: In February 2006, parliament agreed to send an additional 1,400 Dutch troops to join Nato-led forces in Southern Afghanistan. The decision came after weeks of wrangling and international pressure.

Mission In India: Royal Netherlands Embassy, 6/50 F, Shantipath, Chanakyapuri, New Delhi-110021. Tel: 2688 4951-54; Fax: 91-11-24103091 (Consular/Visa)

E-mail: nde@minbuza.nl; Web: holland-in-india.org

Indian Mission in Netherlands: Embassy of India, Buitenrustweg -2, 2517 KD, The Hague, Netherlands. Tel: 00-31-70-3469771; Fax: 00-31-70-3617072.

E-mail: ssembind2bart.nl

Dutch Territories

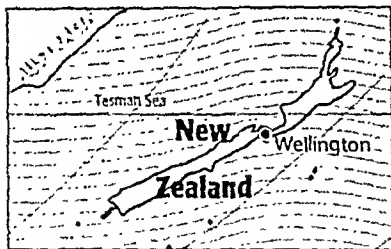
Aruba The island (Area: 193 sq.km., Population: 71,891) which lies in the southern Car-

ibbean, formed part of the Dutch West Indies from 1828 and part of the Netherland Antilles from 1845. Achieved internal self-government in 1954. Aruba was constitutionally separated from the Netherlands Antilles from Jan.1, 1986, and full independence was promised after a 10-year period. But an agreement of 1990 deleted references to eventual independence. Capital: Oranjestad. PM: Nelson O. Oduber.

The Netherlands Antilles (Area: 800 sq.km., Population: 221,736) comprise two groups of islands in the West Indies, the Leeward group (Curacao and Bonaire) and the Windward Islands. In 1954, they became an integral part of the Netherlands but are fully autonomous in internal affairs. Capital: Willemstad; Governor General: Frits Goedgedrag; PM: Etienne YS.

127. New Zealand

Capltal: Wellington; Other Large Cities: Auckland, Christchurch, Hamilton; Area:



269,057 sq.km (excluding dependencies); Population: 4,076,140; Languages: English and Maori dialect; Religions: Anglican-14.9%, Presbyterian-10.9%, Roman Catholic-12.4%, Methodist-2.9%, Baptist-1.3%, Pentecostal-1.7%, other Christian-9.4%, other-3.3%, Unspecified-17.2%, none-26%; Literacy: 99%; Life Expectancy: 78.81; Currency: New Zealand Dollar (\$1=1.616); p.c.i: \$ 25,200; Date of Independence: 26th September, 1907.

Government Type: Parliamentary Democracy; Head of State: Queen Elizabeth II; Gov.Gen: Dame Silvia Cartwright; PM: Ms. Helen Clark.

History: New Zealand, lying in the South Pacific Ocean with Tasman Sea on the west, consists of two large islands, North Island and South Island and numerous small islands. British sovereignty was proclaimed in 1840, with organised settlement beginning in the same year. The colony became a dominion in 1907.

The native Maoris, who reached New Zealand before and during the 14th century, number about 550,000. Six members of Parliament are elected directly by them.

New Zealand plans to do away with the right of appeal to the Privy Council in London - a milestone in the country's exercise to ultimately become a Republic.

The Labour Party won the general election in 1999.

Economy: The major crops are wheat, maize, oats and barley. Minerals include coal, oil and gold. Primary industries are dairying, meat and wool. Pulp and paper industry is highly developed. Iron, steel, aluminium, textiles, transport equipment are other industries.

Recent Events : In May 2006, New Zealand troops joined an intervention force in East Timor, intended to quell unrest. In August, queen of the indigenous Maori population, Te Arkinui Dame Te Atairangikaahu, died aged 75 after a reign of 40 years.

Mission In India: High Commission for New Zealand, Sir Edmund Hillary Marg, Chanakyapuri, New Delhi-110 021. Tel: 2688 3170; Fax: 26883165,

E-mail: nzhc@ndf.vsnl.net.in

Indian Mission In New Zealand: High Commission of India, 180, Molesworth Street, P.O. Box 4045, Wellington, New Zealand. Tel: 00-64-4-4736390; Fax: 00-64-4-4990665.

E-mail: hicomind@clear.net.nz

Overseas Territories

The Cook Islands and Niue are self-governing territories overseas and Ross Dependency and Tokelau are territories overseas within New Zealand's jurisdiction.

The Cook Islands: (241 sq.km.) were placed under New Zealand administration in 1901 and they achieved self-governing status in association with New Zealand in 1965; Population: 21,388

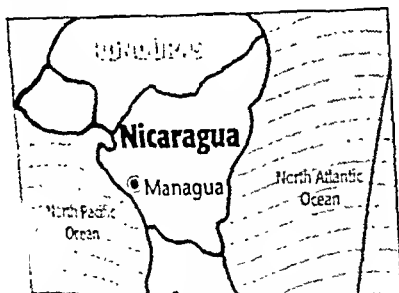
Niue (259 sq.km.), formerly administered as part of Cook Islands, achieved self-governing status in association with New Zealand in 1974. Niue is the largest uplifted coral island in the world. Population: 2,166.

The Ross Dependency: (414,400 sq.km.), an Antarctic region, was placed under New Zealand administration in 1923.

Tokelau: (10 sq.km.) was placed under New Zealand administration in 1925. Population: 1,405.

128. Nicaragua

(Republic of Nicaragua) Republica de Nicaragua



Capital: Managua; Other Large Cities : Leon, Granada; Area: 130,000 sq.km; Population: 5,570,129; Languages: Spanish and English; Religions: Roman Catholic-85%, Protestant; Literacy: 67.5%; Life Expectancy: 70.63; Currency: Gold Cordoba (NIO) (\$1=17.18); p.c.i: \$ 2,900; Date of Independence: 15th September, 1821.

Government Type: Republic; Head of State & Govt.: Enrique Bolanos.

History: The republic of Nicaragua is located in the heart of Central America. It is the largest but most sparsely populated of the Central American nations. It became an independent state in 1838. The Somoza dynasty ruled Nicaragua from 1933 to 1979.

The third Somoza was overthrown by armed revolution led by Sandinista National Liberation Front, which emerged as the leading political force in the election held in 1984. But Contra rebels, comprising mainly former members of Nicaraguan National Guard and supported by the U.S. waged a nine-year war against the government led by Sandinista leader Daniel Ortega. About 30,000 people were killed. With the defeat of Ortega by Violeta Chamorro in the elections held in 1990, the civil war came to a close.

Economy: Agriculture is the principal source of national income. The most important agricultural products are cotton, coffee, sugar-cane, rice, bananas, maize and fruit. Chief industries are food processing, chemicals, matches, leather, beer and plastic goods. Gold, copper, silver, lead and zinc are found.

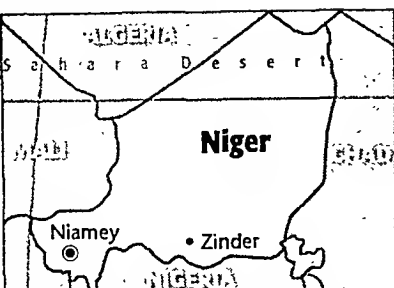
Mission in India: Embassy of Nicaragua Stationed at Panama.

Hon. Consulate, 43-A, Prithviraj Road, New Delhi-110011. Tel: 4694469; Telefax: 3221173.

E-mail: vcb@dabur.com

129. Niger

(Republic of Niger) Republique du Niger
Capital: Niamey; Other Large Cities : Zinder, Maradi; Area: 1,267,000 sq.km; Population: 12,525,094; Languages: French, Hausa and Djerma; Religions: Muslim-80%, remainder indigenous beliefs and Christian; Literacy: 17.6% (1995); Life Expectancy: 43.76; Currency: CFA Franc (\$ 1=518.98); p.c.i: \$ 900;



Date of Independence: 3rd August, 1960.

Government Type: Republic; President: Tandja Mamadou; PM: Hama Amadou.

History: The Republic of Niger lies in the heart of West Africa. Formerly part of French West Africa, Niger became fully independent on Aug. 3, 1960.

A new constitution was adopted by referendum in Dec. '92. Niger's first democratically elected President Mahamane Ousmane was ousted in a coup in January, 1996 by military ruler Ibrahim Mainassara. Elections were held in 1999.

Economy: Niger is an agricultural country with very limited resources. The principal crops are millet, peanuts and cotton. Cattle-breeding is the next most important occupation of the people. Minerals: uranium, coal, iron.

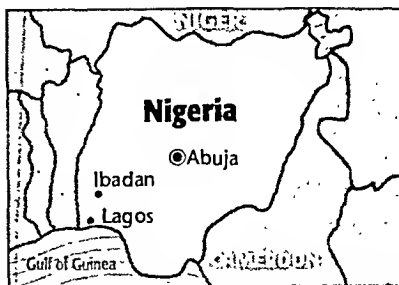
Recent Events: In June 2006, Unions called a national strike to protest against the high cost of living. Health and education ministers were sacked following pressure from donors who alleged corruption.

Mission In India: Embassy of Niger Stationed at Moscow.

130. Nigeria

(Federal Republic of Nigeria)

Capital: Abuja; Other Large Cities : Lagos, Ibadan; Area: 923,768 sq.km; Population: 131,859,731; Languages: English, Hausa, Ibo and Yoruba; Religions: Muslim-50%, Christian-40%, indigenous beliefs-10%; Literacy:



68%; Life Expectancy: 47.08; Currency: Naira (\$1=128.3); p.c.i: \$ 1,400; Date of Independence: 1st October, 1960.

Government Type: Republic; Head of State & Govt (President): Gen.Olusegun Obasanjo.

The Federation of Nigeria on the south coast of West Africa is black Africa's most populous nation. It is a country of 250 tribal groups.

History: Nigeria became an independent state in 1960 and a republic within the Commonwealth in Oct. 1963. Nigerians have seen seven coups in 32 years. Military has ruled the country for 30 of its 40 years of independence.

The chief agricultural products are cocoa, palm oil, palm kernels, grains, fish, cotton, rubber, peanuts and skins. Tin, lead, columbite, coal and iron ore are the chief minerals. Timber, hides and skins, cocoa and palm products are major export items. Crude oil exports have become important since 1970. Oil revenues have made possible a massive economic development programme, but agriculture has lagged. Industry is diversified:- beer, cement, textiles, cigarettes, assembly of vehicles, soap, canned food and aluminium products being the main items. In the early 80s, with a civilian govt. in Lagos, Nigeria became a model of African democracy and prosperity. The civilian govt. was ousted in 1983.

On May 29, 1999 Olusegun Obasanjo, who was elected in February polls, became Nigeria's third civilian President since inde-

pendence, following Nnamdi Azikiwe and Shehu Shagari, ending 15 years of military rule in the country.

The execution of writer and environmentalist Ken Saro-Wiva and eight associates in Nov. 1995 led to international sanctions against Nigeria, including suspension of its Commonwealth membership.

Nigeria has fallen into steep decline. Unemployment has soared. Inflation is high. Purchasing power of most Nigerians has reached subsistence levels.

Recent Events : Militants in the Niger Delta attacked pipelines and other oil facilities and kidnapped foreign oil workers. The rebels demanded more control over the region's oil wealth. In February, more than 100 people were killed when religious violence flared in mainly-Muslim towns in the north and in the southern city of Onitsha. In April, helped by record oil prices, Nigeria became the first African nation to pay off its debt to the Paris Club of rich leaders. More than 150 people were killed in an explosion at an oil pipeline near Lagos. The Senate rejected proposed changes to the constitution which would have allowed President Obasanjo to stand for a third term in 2007. In June, Nigeria agreed to withdraw its troops from the Bakassi Peninsula to settle its long-running border dispute with Cameroon. The breakthrough was reached at UN-mediated summit.

Mission In India: High Commission of the Federal Republic of Nigeria, 21 Olof Palme Marg, Vasant Vihar, New Delhi-110057. Tel: 2614 6221, 2614 6645; Fax: 2614 6617.

E-mail: nhcnd@nde.vsnl.in Web: www.nigeriadelhi.com

Indian Mission in Nigeria: High Commission of India, 8-A, Eleke Crescent, Victoria Island, Lagos, Nigeria. Tel:00-234-1-2616604, 2615078, 2615905. Fax:00-234-1-2612660.

E-mail: hicomindfssimbaonline.net

131. Norway

(Kingdom of Norway) Kongeriket Norge



Capital: Oslo; **Other Large Cities :** Bergen, Trondheim; **Area:** 323,895 sq.km; **Population:** 4,610,820; **Languages:** Norwegian; **Religions:** Church of Norway-85.7%, Pentecostal-1%, Roman Catholic-1%, other Christian-2.4%, Muslim-1.8%, Other- 8.1%; **Literacy:** 100%; **Life Expectancy:** 79.54; **Currency:** Krone (\$1=6.208); **p.c.i:** \$ 42,300; **Date of Independence:** 7th June, 1905.

Government Type: Constitutional Monarchy; **Head of State:** King Harald V; **PM:** Jens Stoltenberg.

History: Norway in North-West Europe occupies the western part of the Scandinavian Peninsula. It is known as the Land of the Midnight Sun, because in North Cape area, the sun does not set from middle May until the end of July, nor does it rise above the horizon from the end of November to the end of January. Nearly 70% of Norway is uninhabitable and covered by mountains, moors, glaciers and rivers. The largest lake is Mjøsa; longest river Glomma; highest mountain Galdhøpiggen.

Norway is a constitutional and hereditary monarchy.

Almost three-quarters of the population live in the major towns and cities. Life expectancy-men 75 years, women-81 years.

The Sami, the indigenous people of the far north, number some 30,000 and form a distinct ethnic minority.

Economy: The important agricultural products are barley, oats, rye, potatoes, fruits and dairy products. Fishing is a major occupation with immense quantities of cod, herring, whale, tuna, seal, mackerel and salmon. Forests provide raw material for many industries. Mining is an important industry. There is very little coal but plenty of hydro-electric power to run big factories. High degree of industrialisation, the base for which was provided by abundant hydroelectric resources, has given Norwegians one of the highest living standards in the world. The principal manufactures are food products, machinery and metal work, wood, paper and pulp, aluminium, electro-chemical products, ships and transportation equipment. Norway is one of world's largest producers of chemical fertiliser. It possesses a large merchant marine. Norway is the world's third-largest exporter of oil, and relies on the black stuff for 200,000 jobs.

The Nobel Peace Prize is awarded every year in Oslo on December 10.

Since the mid-1980s, more than 40% of the members of the Government have been women. In 1993, the first woman bishop was appointed in Norway. Norway has led the way in building a modern welfare state.

Dependencies of Norway: Svalbard (62,700 sq.km), Jan Mayen (380 sq.km.), Bouvet Island (60 sq.km.), Peter I Island (249 sq.km.), and Queen Maud Land.

Mission In India: Royal Norwegian Embassy, Shantipath, Chanakyapuri, New Delhi-110 021. Tel: 26873532, 26873142; Fax: 011-26873814.

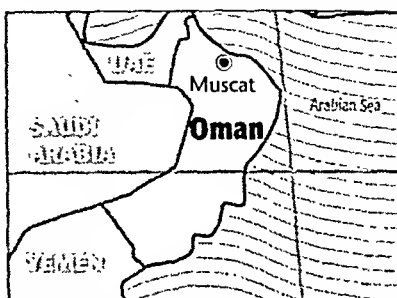
E-mail: noramb@vsnl.com

Indian Mission In Norway: Embassy of India, Niels Juels Gate 30, 0244 Oslo 2, Norway. Tel: 00-47-22443194, 22552229; Fax: 00-47-22440720.

E-mail: iamasade@online.no/india@online.no

132. Oman

(Sultanate of Oman) Saltanat' Uman



Capital: Muscat; **Area:** 300,000 sq.km; **Population:** 3,102,229; **Languages:** Arabic; **Religions:** Ibadhi Muslim-75%, Sunni Muslim, Shi'a Muslim, Hindu; **Literacy:** 75.8%; **Life Expectancy:** 73.37; **Currency:** Rial Omani (\$1=0.385); **p.c.i:** \$ 13,200; **Date of Independence:** 1650.

Government Type: Monarchy; **Head of State & Govt:** Sultan Qabus Bin Said.

History: The Sultanate of Oman, formerly Muscat & Oman, occupies the south-eastern part of the Arabian Peninsula. Oman adopted the present name in 1970.

Economy: Oil is the major source of income. It forms 95% of the exports. Where there is water, the land is very fertile. The 8atina coastal plain is famous for its dates, fruits and grains. Major industries are petroleum drilling, fishing and construction.

The sultanate has spent its oil resources frugally and made careful use of its natural advantages, such as its prime position astride important trade routes. The giant container port and free zone it has built at Salalah looks set to capture a growing share of the Indian Ocean transshipment business.

The Kuria Muria Islands, formerly part of Aden, were given to Oman by the British in 1967.

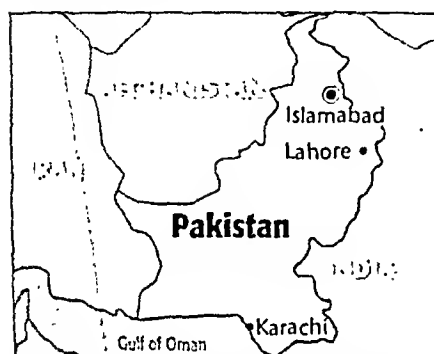
Mission in India: Embassy of the Sultanate of Oman, EP 10&11, Chandragupta Marg, Chanakyapuri, New Delhi-110 021. Tel: 26885622, 26885623; Fax: 26885621

E-mail: omandelhi@vsnl.com

Indian Mission In Oman: Embassy of India, P.O. Box 1727, Ruwi, Muscat, Sultanate of Oman. Tel: 00-968-7714120; Fax: 00-968-7717503. E-mail: indiamct@omantel.net.com

133. Pakistan

(Islamic Republic of Pakistan) Islami Jamhuriya-e Pakistan



Capital: Islamabad; **Other Large Cities :** Karachi, Lahore, Peshawar; **Area:** 796,095 sq.km; **Population:** 165,803,560; **Languages:** Urdu (Official), Punjabi, Sindhi, Pushtu, Baluchi, Brahui, English; **Religions:** Muslim-97% (Sunni-77%, Shi'a-20%), Christian, Hindu and others-3%; **Literacy:** 48.7%; **Life Expectancy:** 63.39; **Currency:** Rupees (US \$1=60.23); **p.c.i:** \$2,400; **Date of Independence:** 14th August, 1947.

Government Type: Federal Republic; **President:** General Pervez Musharraf; **PM:** Shaukat Aziz.

The Islamic Republic of Pakistan is bordered in the north-west by Afghanistan, north by the former USSR and China, east by India and south by the Arabian Sea.

History: The Muslim state that emerged from partition of British India on 14 August 1947 included an eastern wing comprising mainly the eastern half of Bengal province and parts of Assam. (The name Pakistan is a coinage representing 'Punjab, the Afghan

border states, Kashmir, Sind and Baluchistan').

For nine years Pakistan remained a dominion. It was proclaimed an Islamic republic on 23 March 1956. A federal parliamentary system functioned until Field-Marshal Muhammad Ayub Khan seized power in a coup in October 1958. Ayub proclaimed a presidential system in the constitution of 1962 and ruled until March 1969, when he was deposed by Gen. Yahya Khan.

In the first free elections in December 1970, Zulfikar Ali Bhutto's Pakistan People's Party dominated the west, while Sheikh Mujibur Rahman's Awami League swept the board in the east, winning 160 of the 162 seats.

East Pakistan proclaimed sovereignty and formed the People's Republic of Bangladesh on 26 March 1971. Civil war followed after Yahya, supported by Bhutto, ordered troops to arrest Mujib and put down the Bengali uprising. The east-west war ended in December 1971. Yahya handed over power to Bhutto, who ruled until July 1977, before being overthrown after an opposition campaign against alleged rigging in general elections. Gen. Zia-ul-Haq took over—initially to hold elections and transfer power to a civilian regime. But elections were twice postponed and Bhutto was tried for the murder of a political opponent and executed.

Gen. Zia was killed in a plane crash on August 17, 1988 and Senate Chairman Ghulam Ishaq Khan took over as Acting President. The country was placed under emergency rule.

In the general election held on November 16, 1988 the Pakistan Peoples' Party (PPP) led by Benazir Bhutto won the largest number of seats (92). Benazir assumed office as the PM on December 9. Ghulam Ishaq Khan was elected President on December 12.

Benazir was dismissed in Aug 1990. Nawaz Sharif of Islami Jamhoori Movement took over as Pakistan's 11th Prime Minister.

November 5. Sharief was dismissed in 1993. The Supreme Court annulled the dismissal leading to a constitutional impasse. Moeen Qureshi took over as caretaker Prime Minister in July. PPP returned to power in Oct. '93 and Ms. Bhutto took over as PM once again. In Apr. '96, Imran Khan launched a new party 'Movement for Social Justice'. In Nov., Ms. Bhutto was dismissed as PM, the National Assembly dissolved, and M.M. Khalid appointed caretaker PM. On Feb. 17, 1997, Nawaz Sharif was sworn in as Pakistan's 13th PM.

Tensions between the military and PM Sharif ended in a coup by army chief Gen. Pervez Musharraf on Oct. 12, 1999. Nawaz Sharif was later exiled to Saudi Arabia. He was convicted and sentenced to 25-year-long life sentence on charges of hijacking and terrorism. Pakistan was suspended (Oct. 18, 1999) from the Commonwealth.

A milestone in Indo-Pak relations was the Lahore bus ride by Indian PM Vajpayee in Feb. 1999.

Ethnic and communal conflict that had been raging in Karachi intensified in 1995. The Urdu-speaking Muhajirs are demanding equal rights and autonomy. In Jan-Aug., '97, over 150 persons were killed in Shia-Sunni violence, and at least 250 were shot dead in Karachi. In Aug., government enacted a new law to combat the growing sectarianism and terrorism.

Kashmir: Pakistan controls the northern and western portions of Kashmir, an area of about 84,160 sq km with a population of about 2.8 m. in 1985. The Pak-occupied Kashmir has its own Assembly, its own Council, High Court and Supreme Court. There is a Parliamentary form of Government with a Prime Minister as the executive head and the President as the constitutional head. The seat of government is Muzaffarabad.

The Pakistan Government is directly responsible for Gilgit and Baltistan (the north).

On May 28, 1998, Pakistan tested five nuclear devices and this was followed by a sixth one on May 30.

On June 20 2001, Gen. Musharraf declared himself President of the country. Efforts to find a peace formula on issues between India and Pakistan received a boost in the Agr summit in July 2000 between Gen. Pervez Musharraf and PM Vajpayee of India. It ended without a joint declaration but was start for further engagements.

Economy: Agriculture (including forestry and fishing) is the mainstay of Pakistan's economy, employing about 50% of the working population and providing about 26% of the country's gross domestic product (GDP).

The entire area in the north and west is covered by great mountain ranges. The rest of the country consists of a fertile plain watered by five big rivers and their tributaries. Agriculture is dependent almost entirely on the irrigation system based on these rivers. The main crops are wheat, cotton, maize, sugar-cane and rice, while the Quetta and Kalat divisions (Baluchistan) are known for their fruits and dates. Pakistan is self-sufficient in wheat, rice and sugar.

Industry employs about 10% of the population. Manufacturing (refined sugar, vegetable products, jute textiles, soda ash, sulphuric acid, caustic soda, chip board and paper board, bicycles, cotton cloth, cotton yarn, cement and steel) contributes about 20% to GNP. Main exports are cotton cloth, cotton yarns, rice, leather, carpets and tapestries. There are international airports at Karachi, Islamabad, Lahore, Peshawar and Quetta.

Recent Events: In January 2006, up to 18 people were killed in a US missile strike, apparently targeting senior al-Qaeda figures, on a border village in the north. More than 30 people were killed in a suspected suicide bomb attack and ensuing violence at a Shia

Israel would withdraw from Gaza Strip (preferred Palestinian term, Gaza district) and Jericho. Early September, PLO and Israel announced mutual recognition. On 13th, the historic accord was signed in Washington. On May 13, 1994, Israel handed over Jericho to Palestinian police, and on July 5, Arafat established Palestinian self-government there. In January, 1996, he became the first elected Palestinian President with a massive 88.1% of the vote, and took the oath of office as President of the Palestinian Authority on Feb. 12. The electorate was 1,013,200. The Palestinian Council is an 82-member body.

Israeli currency is in use. There is a Palestinian police of some 15,000 men.

President Clinton hosted a summit meeting between PM Netanyahu and Arafat in Oct. and peace talks were resumed. Israel halted talks in July '97 following the suicide bombing in a Jerusalem market which killed about 20 and injured 150. Israel yielded more West Bank territory to Palestinians, under an interim accord signed by Netanyahu and Arafat in Oct. '98. Palestinians gave new security guarantees in return.

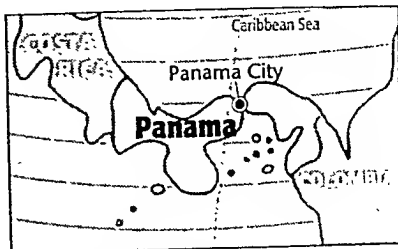
Several dates for announcing an independent Palestinian State were declared since 1999 but nothing has happened.

Mission in India: Embassy of the State of Palestine, D-1/27 Vasant Vihar, New Delhi - 110057. Tel: 26142859, 26146605; Telefax: 26142942.

E-mail: palestine@starith.net

Indian Mission in Palestine: Representative office of India, 182-49, Shurta Street, Al Remal, P.O. Box. 1065, Gaza City, State of Palestine. Tel: 00-972-87-2825423, 2838199; Fax: 00-972-87-2825433.

E-mail: roi_gaza@trendline.co.in



Miguelito, David; Area: 77,082 sq.km; Population: 3,191,319; Languages: Spanish, English; Religions: Roman Catholic-85%, Protestant-15%; Literacy: 92.6%; Life Expectancy: 75.22; Currency: Balboa (\$1=1); p.c.i: \$ 7,200; Date of Independence: 3rd November, 1903.

Government Type: Republic; President & PM: Martin Torrijos.

History: Panama, the southern-most of the Central American nations, is a narrow strip of territory at the southern end of the isthmus separating North and South America. Panama declared its independence from Colombia on Nov. 3, 1903.

In 1979, Panama assumed sovereignty over what was previously known as the Panama Canal Zone and now called the Canal Area.

Control over the 81.6-km waterway Panama Canal, linking the Atlantic and the Pacific oceans, had long been a bone of contention between the US and Panama. On Jan. 1, 2000, Panama took full control of the Canal, 785 years after the strategic waterway was opened.

Economy: The soil is extremely fertile but nearly one-half of the land is uncultivated. The chief crops are bananas, coffee, pineapple, cocoa and cereals. Shrimp fishing is important. There are excellent timber resources, notably mahogany. Industry: Oil refining, sugar, food processing, international banking.

Mission In India: Embassy of Panama, Post Box No. 3168, Jor Bagh, New Delhi-110 003.

136. Panama

(Republic of Panama) Republica de Panama
Capital: Panama City; Other Large Cities: San

Tel: 24642518, 24627890; Fax: 24642350.

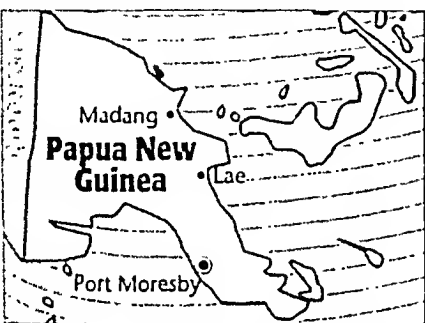
E-mail: panaind@bol.net.in

Indian Mission in Panama: Embassy of India, No.10325, Avenida Federico Boyd Y Calle 51, Bella Vista, Post Box No.8400, Panama 7, Republic of Panama. Tel: 00-507-2642416, 2643043, 2648780; Fax: 00-507-2642855.

E-mail: indempan@panama.c.com.net

137. Papua New Guinea

Independent State of Papua New Guinea



Capital: Port Moresby; **Other Large Cities:** Lae, Madang, Wawek; **Area:** 462,840 sq.km; **Population:** 5,670,544; **Languages:** English, Melanesian and Papuan languages; **Religions:** Roman Catholic-22%, Lutheran-16%, Presbyterian/Methodist/London Missionary Society-8%, Anglican-5%, Evangelical Alliance-4%, Seventh Day Adventist-1%, Other Protestant-10%, indigenous beliefs-34%; **Literacy:** 64.6%; **Life Expectancy:** 65.28; **Currency:** Kina (\$1=2.98); **p.c.i:** \$ 2,600; **Date of Independence:** 16th September, 1975.

Government Type: Parliamentary Democracy; **Gov. Gen:** Sir Paulis Matane; **PM:** Sir Michael Somare.

Papua New Guinea comprises the eastern section of the island of New Guinea (the western half belongs to Indonesia-) and adjacent islands. New Guinea is the second largest island in the world.

History: It is a region of lofty mountains and swampy plains. The surrounding islands

are largely of volcanic or coral origin. The population consists of dark-skinned Melanesians, who live mostly along the coast and woolly-haired Papuans who inhabit the interior. There are more than 800 tribes, many of whom live in almost complete isolation with mutually unintelligible languages. Became independent on Sept. 16, 1975, ending a U.N. trusteeship under the administration of Australia. All citizens above 18 are eligible to vote and stand for election.

More than 20,000 people have died on the island of Bougainville where a protest against a copper mine evolved into a ten-year long rebellion that 13 rounds of peace talks have failed to resolve. Fighting by the government and the secessionist Bougainville Revolutionary Army was halted by a truce in Oct. '97. There was a severe drought in 1997. On July 18, 1998 a devastating tidal wave killed at least 3000 people and wiped away a number of villages along the coastline.

Economy: Agriculture occupies the majority of the population, most of whom are subsistence farmers. Main food crops. Sago, yams, taro, manioc, and sweet potatoes. Cash crops include coconuts, cocoa, coffee and rubber. The country has large deposits of copper, gold, silver and oil. Nevertheless, Papua New Guinea remains a poor country, still receiving aid from Australia. The massive mining royalties, estimated at \$ 2 billion, also support economy. **Industries:** Food processing, beverages, tobacco, timber products.

Mission in India: High Commission of Papua New Guinea stationed at Kuala Lumpur.

Indian Mission in Papua New Guinea: High Commission of India, Suite No.G-5, Hotel Islander Travelodge, P.O Box 86, Walgani, NCD, Port Moresby, Papua New Guinea. Tel: 00-675-3254757, 3251373; Fax: 00-675-3253138, 3201718(R).

E-mail: hcipom@datec.com.pg

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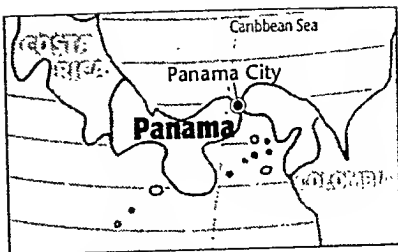
E-mail: palestin@stanith.net

Indian Mission in Palestine: Representative office of India, 182-49, Shurta Street, Al Remal, P.O. Box. 1065, Gaza City, State of Palestine. Tel: 00-972-87-2825423, 2838199; Fax: 00-972-87-2825433.

E-mail: roi_gaza@trendline.co.in

136. Panama

(Republic of Panama) Republica de Panama
Capital: Panama City; Other Large Cities: San



Miguelito, David; Area: 77,082 sq.km; Population: 3,191,319; Languages: Spanish, English; Religions: Roman Catholic-85%, Protestant-15%; Literacy: 92.6%; Life Expectancy: 75.22; Currency: Balboa (\$1=1); p.c.i.: \$7,200; Date of Independence: 3rd November, 1903.

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Control over the 81.6-km waterway Panama Canal, linking the Atlantic and the Pacific oceans, had long been a bone of contention between the US and Panama. On Jan.1.2000. Panama took full control of the Canal, 785 years after the strategic waterway was opened.

Economy: The soil is extremely fertile but nearly one-half of the land is uncultivated. The chief crops are bananas, coffee, pineapple, cocoa and cereals. Shrimp fishing is important. There are excellent timber resources, notably mahogany. Industry: Oil refining, sugar, food processing, international banking.

Mission in India: Embassy of Panama, Post Box No. 3168, Jor Bagh, New Delhi-110 003.

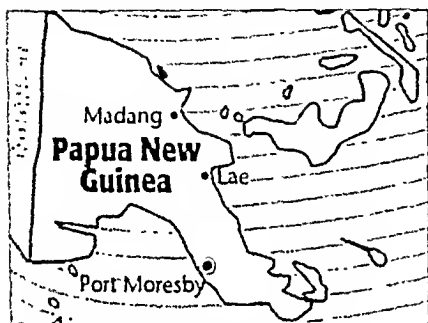
Tel: 24642518, 24627890; Fax: 24642350.
E-mail: pana&nd@bol.net.in

Indian Mission in Panama: Embassy of India, No.10325, Avenida Federico Boyd Y Calle 51, Bella Vista, Post Box No.8400, Panama 7, Republic of Panama. Tel: 00-507-2642416, 2643043, 2648780; Fax: 00-507-2642855.

E-mail: indempan@panama.c.com.net

137. Papua New Guinea

Independent State of Papua New Guinea



Capital: Port Moresby; Other Large Cities: Lae, Madang, Wawek; Area: 462,840 sq.km; Population: 5,670,544; Languages: English, Melanesian and Papuan languages; Religions: Roman Catholic-22%, Lutheran-16%, Presbyterian/Methodist/London Missionary Society-8%, Anglican-5%, Evangelical Alliance-4%, Seventh Day Adventist-1%, Other Protestant-10%, indigenous beliefs-34%; Literacy: 64.6%; Life Expectancy: 65.28; Currency: Kina (\$1=2.98); p.c.i: \$ 2,600; Date of Independence: 16th September, 1975.

Government Type: Parliamentary Democracy; Gov. Gen: Sir Paulis Matane; PM: Sir Michael Somare.

Papua New Guinea comprises the eastern section of the island of New Guinea (the western half belongs to Indonesia) and adjacent islands. New Guinea is the second largest island in the world.

History: It is a region of lofty mountains and swampy plains. The surrounding islands

are largely of volcanic or coral origin. The population consists of dark-skinned Melanesians, who live mostly along the coasts and woolly-haired Papuans who inhabit the interior. There are more than 800 tribes, many of whom live in almost complete isolation, with mutually unintelligible languages. Became independent on Sept. 16, 1975, ending a U.N. trusteeship under the administration of Australia. All citizens above 18 are eligible to vote and stand for election.

More than 20,000 people have died on the island of Bougainville where a protest against a copper mine evolved into a ten-year-long rebellion that 13 rounds of peace talks have failed to resolve. Fighting by the government and the secessionist Bougainville Revolutionary Army was halted by a truce in Oct. '97. There was a severe drought in 1997. On July 18, 1998 a devastating tidal wave killed at least 3000 people and wiped away a number of villages along the coastline.

Economy: Agriculture occupies the majority of the population, most of whom are subsistence farmers. Main food crops: Sago, yams, taro, manioc, and sweet potatoes. Cash crops include coconuts, cocoa, coffee and rubber. The country has large deposits of copper, gold, silver and oil. Nevertheless, Papua New Guinea remains a poor country, still receiving aid from Australia. The massive mining royalties, estimated at \$ 2 billion, also support economy. Industries: Food processing, beverages, tobacco, timber products.

Mission in India: High Commission of Papua New Guinea stationed at Kuala Lumpur.

Indian Mission in Papua New Guinea: High Commission of India, Suite No.G-5, Hotel Islander Travelodge, P.O Box 86, Walgani, NCD, Port Moresby, Papua New Guinea. Tel: 00-675-3254757, 3251373; Fax: 00-675-3253138, 3201718(R).

E-mail: hciipom@datec.com.pg

Israel would withdraw from Gaza Strip (preferred Palestinian term, Gaza district) and Jericho. Early September, PLO and Israel announced mutual recognition. On 13th, the historic accord was signed in Washington. On May 13, 1994, Israel handed over Jericho to Palestinian police, and on July 5, Arafat established Palestinian self-government there. In January, 1996, he became the first elected Palestinian President with a massive 88.1% of the vote, and took the oath of office as President of the Palestinian Authority on Feb.12. The electorate was 1,013,200. The Palestinian Council is an 82-member body.

Israeli currency is in use. There is a Palestinian police of some 15,000 men.

President Clinton hosted a summit meeting between PM Netanyahu and Arafat in Oct. and peace talks were resumed. Israel halted talks in July '97 following the suicide bombing in a Jerusalem market which killed about 20 and injured 150. Israel yielded more West Bank territory to Palestinians, under an interim accord signed by Netanyahu and Arafat in Oct. '98. Palestinians gave new security guarantees in return.

Several dates for announcing an independent Palestinian State were declared since 1999 but nothing has happened.

Mission In India: Embassy of the State of Palestine, D-1/27 Vasant Vihar, New Delhi - 110057. Tel: 26142859, 26146605; Telefax: 26142942.

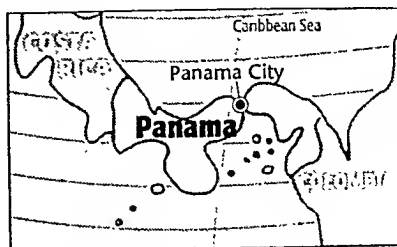
E-mail: palestin@starith.net

Indian Mission in Palestine: Representative office of India, 182-49, Shurta Street, Al Remal, P.O. Box. 1065, Gaza City, State of Palestine. Tel: 00-972-87-2825423, 2838199; Fax: 00-972-87-2825433.

E-mail: roi_gaza@trendline.co.in

136. Panama

(Republic of Panama) Republica de Panama
Capital: Panama City; Other Large Cities: San



Miguelito, David; Area: 77,082 sq.km; Population: 3,191,319; Languages: Spanish, English; Religions: Roman Catholic-85%, Protestant-15%; Literacy: 92.6%; Life Expectancy: 75.22; Currency: Balboa (\$1=1); p.c.i.: \$ 7,200; Date of Independence: 3rd November, 1903.

Government Type: Republic; President & PM: Martin Torrijos.

History: Panama, the southern-most of the Central American nations, is a narrow strip of territory at the southern end of the isthmus separating North and South America. Panama declared its independence from Colombia on Nov. 3, 1903.

In 1979, Panama assumed sovereignty over what was previously known as the Panama Canal Zone and now called the Canal Area.

Control over the 81.6-km waterway Panama Canal, linking the Atlantic and the Pacific oceans, had long been a bone of contention between the US and Panama. On Jan.1.2000. Panama took full control of the Canal, 785 years after the strategic waterway was opened.

Economy: The soil is extremely fertile but nearly one-half of the land is uncultivated. The chief crops are bananas, coffee, pineapple, cocoa and cereals. Shrimp fishing is important. There are excellent timber resources, notably mahogany. Industry: Oil refining, sugar, food processing, international banking.

Mission In India: Embassy of Panama, Post Box No. 3168, Jor Bagh, New Delhi-110 003.

Tel: 24642518, 24627890; Fax: 24642350.

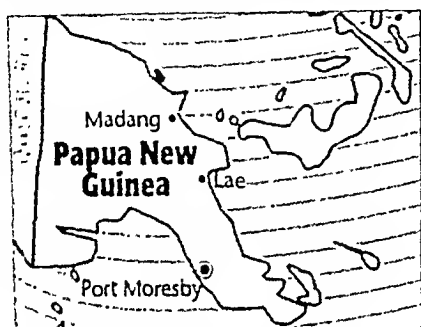
E-mail: panaind@bol.net.in

Indian Mission in Panama: Embassy of India, No.10325, Avenida Federico Boyd Y Calle 51, Bella Vista, Post Box No.8400, Panama 7, Republic of Panama. Tel: 00-507-2642416, 2643043, 2648780; Fax: 00-507-2642855.

E-mail: indempan@panama.c.com.net

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Economy: Agriculture occupies the majority of the population, most of whom are subsistence farmers. Main food crops: Sago, yams, taro, manioc, and sweet potatoes. Cash crops include coconuts, cocoa, coffee and rubber. The country has large deposits of copper, gold, silver and oil. Nevertheless, Papua New Guinea remains a poor country, still receiving aid from Australia. The massive mining royalties, estimated at \$ 2 billion, also support economy. **Industries:** Food processing, beverages, tobacco, timber products.

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Indian Mission in Papua New Guinea: High Commission of India, Suite No.G-5, Hotel Islander Travelodge, P.O Box 86, Walgani, NCD, Port Moresby, Papua New Guinea. Tel: 00-675-3254757, 3251373; Fax: 00-675-3253138, 3201718(R).

E-mail: hcipom@datec.com.pg

138. Paraguay

(Republic of Paraguay) Republica del Paraguay



Capital: Asuncion; **Other Large Cities :** San Lorenzo, Encarnacion; **Area:** 406,752 sq km; **Population:** 6,506,464; **Languages:** Spanish, Guaraní; **Religions:** Roman Catholic-90%, Mennonite and other Protestant-10%; **Literacy:** 94%; **Life Expectancy:** 75.1; **Currency:** Guaraní (\$1= 5,830); **p.c.i:** \$ 4,900; **Date of Independence:** 14th May, 1811.

Government Type: Republic; **Head of State & Govt (President):** Nicanor Duarte Frutos.

History: Paraguay is one of the two landlocked countries of South America surrounded by Bolivia, Brazil and Argentina. The Paraguay river is navigable for some 3000 km. and steamers come upto Asuncion which is the chief port of the state. This makes up for lack of coastline or sea harbours. Paraguay gained independence from Spain on May 14, 1811. Gen. Alfredo Stroessner ruled from 1954 to 1989, until ousted in a military coup.

Economy: About 75 per cent of the population is engaged in agriculture and allied pursuits with cattle breeding as an important occupation. Main crops are maize, cotton, beans, tobacco and citrus fruits. The timber resources of the state are enormous. The chief exports are beef and other food products, quebracho (hard wood), hides and skins, cotton fibre and soya. **Industries:** Food processing, wood products, textiles, cement.

There was a coup attempt in May, 2000. An opposition leader, Julio Cesar Franco, was declared the winner in Paraguay's elections

for Vice President in August. This created an unprecedented power-sharing arrangement with the President from the ruling party.

Recent Events: In June 2006, Luis Gonzalez Macchi, President from 1999-2003, was sentenced to six years in jail over illegal bank transfers. In August, former military ruler Alfredo Stroessner died in exile in Brazil, aged 93.

Indian Mission in Paraguay: Honorary Consulate General of India, Avda, Eusebio Ayala 3663 Km.4, Asuncion, Paraguay. Tel: 00-595-21-660111; Fax: 00-595-21-660115.

139. Peru

(Republic of Peru) Republica del Peru



Capital: Lima; **Other Large Cities:** Arequipa, Callao; **Area:** 1,281,215 sq.km; **Population:** 28,302,603; **Languages:** Spanish, Quechua, Aymara; **Religions:** Roman Catholic-90%; **Literacy:** 87.7%; **Life Expectancy:** 69.84; **Currency:** New Sol (\$1=3.26); **p.c.i:** \$ 5,900; **Date of Independence:** 28th July, 1821.

Government Type: Republic; **President:** Alejandro Toledo; **PM:** Pedro Pablo Kuczynski.

History: Peru is on the Pacific coast of S. America. It was originally the seat of the famous Inca (Red Indian) Empire. It became independent on 28 July, 1821. After a military coup in 1968, civilian government was restored in 1980. A new constitution was promulgated in Dec. '93.

The Andes mountains dominate Peru. One of the rarest species of animals, the vicuña, the llama, the alpaca and the cross-breed paco-vicuna are found in the Andean mountains, where they are now protected.

Economy: The leading agricultural products are cotton, wool, sugar, coffee, rice, beans and potatoes. Corn which is native to Peru is the staple food of the Indians, who also cultivate alfalfa. Fishing industry is well developed and Peru is the world's most important producer of fishmeal. The country, rich in minerals, is one of the leading producers of silver. Some of the biggest copper mines in the world are located in Peru. The chief exports are cotton, fish products, petroleum, copper and iron ore.

Mission In India: Embassy of the Republic of Peru, C-1/24, Vasant Vihar, New Delhi-110 057. Tel: 26141154, 26152294; Fax: 26141155.

E-mail: info@embaperuindia.com

Web: www.embaperuindia.com

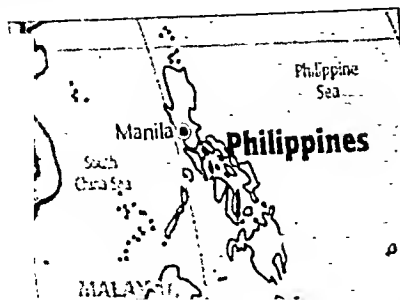
Indian Mission In Peru: Embassy of India, 3006, Magdalena del Mar, Lima, 17, Peru. Tel: 00-51-1-2616006, 4602289, 2616751; Fax: 00-51-1-4610374.

E-mail: consular@indembassy.org.po

Website : www.indembassy.org.po

140. The Philippines

(Republic of the Philippines) Republika ng Pilipinas



Capital: Manila; **Other Large Cities :** Quezon City, Davao; **Area:** 299,404 sq.km; **Population:** 89,468,677; **Languages:** Filipino, English and Spanish; **Religions:** Roman Catholic-80.9%, Evangelical-2.8%, Iglesia ni Kristo-2.3%, Aglipayan-2%, other Christian-4.5%, Muslim-5%, other-1.8%, unspecified-.6%, none-0.1%; **Literacy:** 92.6%; **Life Expectancy:** 70.21; **Currency:** Peso (\$1=63.16); **p.c.i:** \$5,100; **Date of Independence:** 12th June, 1898.

Government Type: Republic; **President & PM:** Ms. Gloria Macapagal Arroyo.

An archipelago of about 7100 islands, the Republic of the Philippines lies in the western Pacific Ocean, over 800 km. off the south-east coast of Asia. Just 11 islands constitute 94 per cent of the total land area. The principal islands are Luzon in the north and Mindanao in the south.

History: The Philippine islands, discovered by Magellan in 1521, were conquered by Spain in 1565. The islands, named for King Philip II of Spain, were ceded to USA in 1898. Became completely independent in 1946.

Economy: Main agricultural crops are rice, maize, sugar, tobacco, coconut, pineapple and bananas. Manufacturing is a major source of economic development. Industries include textiles, rubber products, oil refinery, pharmaceuticals, chemicals, electronics assembly, furniture, cigarettes, paper, metal, glassware and food products. The Philippines is rich in natural resources and has iron, silver, gold, chromite, manganese and copper deposits in commercial quantity. It has also marble quarries, forests and extensive fishing grounds.

Ferdinand Marcos was President from 1965 to '86. Corazon Aquino succeeded him. The U.S. vacated the Subic Bay Naval Station at the end of the year.

Government and Moslem separatist negotiators signed an agreement on Aug. 30,

the south of the country which had claimed 125,000 lives. A plebiscite is to be held in 14 provinces on Mindanao island.

Recent Events: In February 2006, 74 people were killed and hundreds were injured in a stampede for tickets for a TV game show at a stadium in Manila. More than 1,000 people were killed by a mudslide which engulfed a village on the central island of Leyte. President Arroyo declared a week-long state of emergency after the army said it had foiled a planned coup. The death penalty was abolished in June. It was scrapped in 1987 but had been re-introduced.

Mission In India: Embassy of the Philippines, 50-N, Nyaya Marg, Chanakyapuri, New Delhi-110 021. Tel: (91-11) 24101120, 26889091; Fax: 26876401.

E-mail: newdelhipe@vsnl.net.in

Consulate: Mumbai: Tel:22024792, Fax: 22814103; Kolkata: Tel: 22808353, Fax: 22808354; Chennai: Tel:2354063, Fax: 2352062

Indian Mission In Philippines: Embassy of India, 2190 Paraiso Street, Dasmarinas Village, Makati, Metro, Manila, Philippines, Tel: 00-63-2-8430101/02; Fax: 00-63-2-8158151.

E-mail: eimani@vasia.com

141. Poland

(Republic of Poland) Rzeczpospolita Polska
Capital: Warsaw; Other Large Cities : Lodz, Krakow; Area: 312,677 sq.km; Population:



38,536,869; Languages: Polish; Religions: Roman Catholic-89.8%, Eastern Orthodox-1.3%, Protestant-0.3%, other-0.3% and unspecified-8.3%; Literacy: 99.8%; Life Expectancy: 74.97; Currency: Zloty (\$1=3.21); p.c.i: \$: 13,300; Date of Independence: 11th November, 1918.

Government Type: Republic; President: Lech Kaczynski ; PM: Jaroslaw Kaczynski.

History: A republic of upper central Europe, Poland's history goes back to the tenth century A.D. Partitioned in the 18th century, it became independent in 1918. The Nazi invasion of Poland in 1939 initiated World War II. The country was liberated again in 1944.

Solidarity movement led by Nobel Prize winner Lech Walesa played an important part in bringing down the communist dictatorship in 1989. The communist party was dissolved in 1990. Poland joined the European Union on May 1, 2004.

Economy: About 62% of the population are urban; 32% of the population are engaged in agriculture. Chief crops are rye, wheat, oats, potatoes, sugar beets, tobacco and flax. The country has vast resources of mineral wealth, particularly coal, besides iron, lignite, natural gas, lead, zinc and sulphur. Textiles, chemicals and metallurgy are old, established industries. New industries include automobiles, tractors, heavy machinery, shipbuilding and aircraft manufacturing. Main exports are ships, coal, steel and clothing. Wide ranging measures to convert the economy into a market oriented system were introduced in 1989. In 1991, the government announced an ambitious privatisation plan.

Recent Events : In January 2006, more than 60 people were killed when roof of Katowice trade centre collapsed. In May, Law and Justice party reached majority coalition agreement with self-Defence Party and League of Polish families. In July, President Lech Kaczynski's twin brother, Jaroslaw became premier.

ssion in India: Embassy of the Republic
and, 50-M, Shantipath, Chanakyapuri,
Delhi-110021. Tel: 51496900 (Amba-
dor's Office: 51496901); Fax:
1914(Embassy)/ 26872033(Commer-
section)

mail: gorski@de12.vsnl.net.in

onsulate General of the Republic of Po-
in Mumbai: Manavi Apartments, 2nd
36, B.G. Kher Marg, Malabar Hill,
mbai-400 006; Ph: (91 22) 23633863

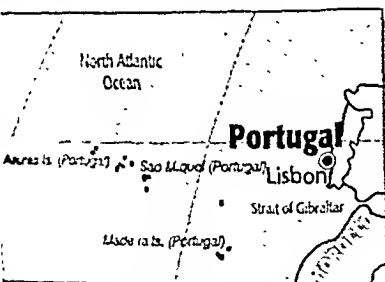
-mail: poland@vsnl.com

ndian Mission in Poland: Embassy of
ia, Ul. Rejtana 15 (Flats 2 to 7) Mokotow,
516 Warasaw, Poland. Tel: 00-48-22-
95800, 8496257; Fax: -00-48-22-
96705, 8498505.

E-mail: ss_com@it.com.pl

42. Portugal

(Republic of Portugal) Republica Portuguesa



Capital: Lisbon; Other Large Cities: Opporto,
Amadora; Area: 92,072 sq.km; Population:
10,605,870; Languages: Portuguese; Reli-
gions: Roman Catholic-94%, Protestant; Liti-
eracy: 93.3%; Life Expectancy: 77.7; Cur-
rency: Euro (\$1=0.79); p.c.i: \$ 19,300; Date
of Independence: 1143.

Government Type: Republic; President:
Anibal Cavaco Silva; PM: Jose Socrates.

Portugal is a small rectangular territory in
the southwest corner of the Iberian Penin-
sula.

dom from the 12th century. It became a re-
public in 1910. The period 1932-68 saw a
strong, repressive government headed by
Premier Antonio de Oliveira Salazar. Portu-
gal is a member of the European Union.

The Atlantic archipelagoes of the Azores
and of Madeira form autonomous but inte-
gral parts of the republic.

Economy: Nineteen per cent of the coun-
try is forest, where pine, oak, chestnut and
cork grow in abundance. Winegrapes, olives,
grains and potatoes are the principal agricul-
tural products. The major minerals are coal,
copper, kaolin, wolframite, lithium and tita-
nium. Textiles, chemicals, paper, footwear
and glassware are the principal manufactures.
The main exports are wine, canned sardines,
tuna, anchovies, resins and cork. Portugal is
one of the leading producers of cork.

In 1989, a package of reforms that did
away with the socialist economy was ap-
proved by parliament.

In August, '98, Portugal and Indonesia
agreed to discuss an Indonesian plan that
would confer a special status for East Timor.

Portugal returned Macao to China in
Dec., 1999.

Recent Events: Elections were held in Feb-
ruary, 2005.

Mission in India: Embassy of Portugal, 8,
Olof Palme Marg, Vasant Vihar, New Delhi-
110 057. Tel: 26142215; Fax: 26152837

E-mail: emportin@ndf.vsnl.net.in

Web: www.embportindia.com

Indian Mission in Portugal: Embassy of In-
dia, Rua Pero da Covilha, No.16, 1400
Lisbon, Portugal. Tel: 00-351-21-3041090;
Fax: 00-351-21-3016576.

E-mail: indiaembcom@mail.telepac.pt

Overseas Territories

Azores Islands

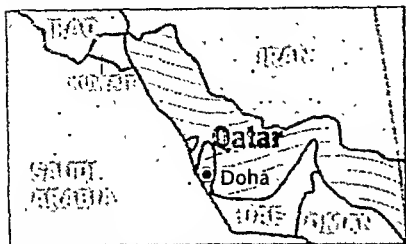
Area: 2248 sq.km; Population: 238,000; In
the Atlantic. Partial autonomy was offered in

The Madeira Islands

Area: 795 sq.km.; Population: 437,312; Off the North East coast of Africa. Autonomous Region since 1976.

143. Qatar

(State of Qatar) Dawlatal-Qatar



Capital: Doha; Area: 11,437 sq.km; Population: 885,359; Languages: Arabic, English; Religions: Muslim-95%; Literacy: 89%; Currency: Riyal (QAR) (\$1=3.64); p.c.i: \$ 27,400; Life Expectancy: 73.9; Date of Independence: 3rd September, 1971.

Government Type: Traditional Monarchy; Head of State & Govt. (The Amir): Sheikh Hamad bin Khalifah al Thani.

Qatar is a 160 km. long tongue of land jutting into the Persian (Arabian) Gulf. It is surrounded almost on three sides by the Persian Gulf. Saudi Arabia lies to the south.

History: Qatar declared its independence from Britain on Sept. 3, 1971. It is an absolute monarchy. Oil revenues give Qatar a per capita income among the highest in the world.

In May, '98, the Amir said that Qatar will have a constitution. In 1999 municipal elections, two men participated for the first time as candidates and voters.

Economy: Most of the population live in and around Doha, the capital. Immigrants from Pakistan, Iran and Oman now outnumber the native Qataris. Today the oil industry provides over 90% of the national income but employs only less than 5% of the popu-

lation. Even so, the future lies with gas. Qatar Dukhan field has been exploited since 1981 but most attention is now focused on the North field, which is the world's largest gas field not associated with oil. Qatar is connected by road to the rest of Arabia and by air to the rest of the world. Agriculture: Cereals, fruits, vegetables, dates. Industries: fertilisers, steel, petrochemicals, cement.

Mission in India: Embassy of the State of Qatar, EP-31A, Chandragupta Marg, Chanakyaपुरी, New Delhi-110021. Tel: 26117988 26118486 (Ambassador's Office) Fax: 26886080.

Indian Mission in Qatar: Embassy of India P.O. Box 2788, Al-Hilal Area, Doha, Qatar. Tel: 00-974-4672021, 46772716; Fax: 00-974-4670448.

E-mail: indembdh@qatar.net.qa

144. Romania

Capital: Bucharest; Other Large Cities: Brasov,



Timisoara; Area: 237,500 sq km; Population: 22,303,552; Languages: Romanian, Hungarian, German; Religions: Eastern Orthodox-87%, Protestant-6.8%, Catholic-5.6%, Jews-0.4%, unaffiliated-0.2%; Literacy: 98%; Life Expectancy: 71.63; Currency: Leu (National Lei.) (\$1=2.78); p.c.i: \$ 8,200; Date of independence: 9th May, 1877.

Government Type: Republic President: Traian Basescu; PM: Calin Popescu Tariceanu.

Romania lies in the south east of the

tral part of Europe. Ethnic mix: Romanians 89%, Hungarians 9%, others 2%.

Modern Romania was formed in 1859. In 1877, Romania proclaimed independence from Turkey, became an independent state in 1878, a kingdom in 1881 and a constitutional monarchy with a bicameral legislature in 1886. A People's Republic was proclaimed in 1947. In 1965, Romania became a socialist republic. It ended Communist dictatorship in 1989 by shooting long-time president Nicolae Ceausescu. National Salvation Front took over power in 1990. Romania's King Michael returned home in Feb., 1997, 50 years after Communists banished him.

Industry, which accounts for 30% of the GDP, dominates Romanian economy. Heavy industries are predominated by drilling rigs for oil, equipment for oil refineries, petrochemical industry, cement, thermo and hydro electric power, diesel and electric locomotives of high capacity, engineering and consumer goods, etc. Many state-owned companies were privatised in 1996.

Romanian agriculture recorded profound changes during the last three decades, beginning with the land reforms of 1945. Chief crops: grains, potatoes, vegetables, sunflower. Forests cover over a quarter of the country.

The exports are mostly made up of machines and equipment, chemical products, chemicals, fertilisers and industrial consumer goods.

Recent Events: In January 2006, at least seven miners died in coal mine explosion. In February, former prime minister Adrian Nastase was charged with corruption. He insisted he had done nothing wrong.

Mission in India: Embassy of Romania, A-47, Vasant Marg, Vasant Vihar, New Delhi-110057. Tel: 26140447, 26140700; Fax: 26140611.

E-mail:emrond@hotmail.com, emrond@yahoo.com, econd@yahoo.com

Indian Mission in Romania: Embassy of India, 11, Uruguay Street, Sector 1, Bucharest (Romania). Tel: 00-40-1-2225451, 2228715, Fax: 00-40-1-2232681.

E-mail:amb@econd.romania.ro, econd.romania.ro

145. Russia

(Russian Federation; Rossiya); a Federative Republic
Capital: Moscow; **Other Large Cities:** St. Petersburg, Samara; **Area:** 17,075,000 sq. km; **Population:** 142,693,540; **Languages:** Russian, Ukrainian, Belarussian, Uzbek, Armenian, Azerbaijani, Georgian, and others; **Religion:** Russian Orthodox-15.20%, Muslim-10-15%, other Christian-2%; **Literacy:** 99.6%; **Life Expectancy:** 67.68. **Currency:** Rouble (\$1=27.02) (floating); **pub. S 10, 100.** **Date of Independence:** 24th August, 1991

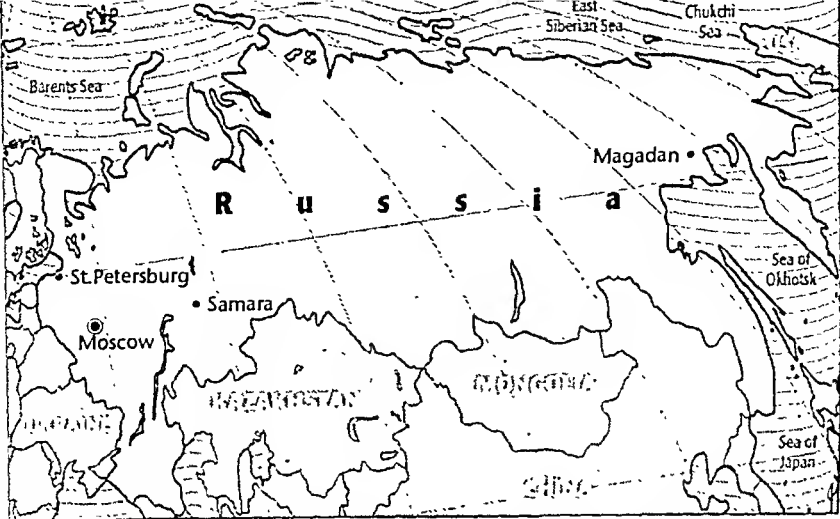
Government Type: Federal Republic; **President:** Vladimir Putin; **PM:** Mikhail Fradkov

Russia, the largest country in the world in area, stretches across the continents of Asia and Europe. It extends for over 9600 km from the Baltic Sea to the Pacific Ocean and for 4800 km from north to south.

History: Russia, an independent country since 1991, is 75% of the total area of the former Soviet Union and has 50% of its total population. About 70% of USSR's total industrial and agricultural output came from Russia.

Russia has now taken the place of the former Soviet Union in international fora. Russia adopted the name 'Russian Federation'.

On December 8, 1991, Russia, Belarus and Ukraine concluded an agreement establishing a Commonwealth of Independent States (CIS) with its headquarters in Minsk. The member states are the three founders and nine subsequent adherents: Armenia, Azerbaijan, Moldova, and the Central Asian republics of Kazakhstan, Kyrgyzstan, Turkmenistan,



Turkmeni-stan and Uzbekistan and Georgia.

The Russian Federation consists of 21 Republics, 6 Territories, 49 Provinces, 10 Autonomous Areas, 2 Cities of federal status (Moscow & St.Petersburg) and the Jewish Autonomous Region (Birobijan).

In 1993, a drive to privatise thousands of large and medium-sized state-owned enterprises was launched. President Yeltsin narrowly survived an impeachment vote by the Congress of Deputies in March. In Oct., Yeltsin ordered the army to attack and seize the parliament building, where anti-Yeltsin legislators had barricaded themselves. About 140 people were killed in the fighting. In Feb. '94, parliament amended those arrested after the occupation of the parliament building.

In July '94, Russia joined NATO's partnership for peace plan of military cooperation with former communist states. In May, '96, presidents of Russia, Belarus, Kazakhstan and Kyrgyzstan signed a treaty to boost closer links among them.

Chechen separatists have been a major problem since the winter of 1994-'95 when Russian troops were sent in to crush

Chechnya's secessionist leadership. In August, '96, the war ended with an agreement between the government and the separatists to defer the decision on whether Chechnya should be independent until Dec. 31, 2001. Fighting resumed and Russia suffered heavy losses.

In Apr. '97, the presidents of Russia, Kazakhstan, Kyrgyzstan, Tajikistan and China signed a demilitarisation accord providing for considerable troop reductions along their 7000 km. common border.

In Aug.97, Russia announced the dismantling of all rocket missiles targeted on western strategic centres. Russia's army was to shrink from 1.8m. to 1.2m.

Russia attended G-8 summit as a full-fledged member.

Economy: Grain, cotton, potatoes, sugar beets, sunflower, are the main agricultural products. Natural resources include iron ore, oil, gold, platinum, copper, zinc, Russia also has the world's large timber. Russia's gold industry is second largest. Steel mills, huge dam gas industries and electric railroads.

transformed parts of Siberia. The Russian fishing fleet, operating from the Arctic waters to the Pacific, is one of the biggest in the world.

Recent Events: In January 2006, Russia briefly cut supply of gas for Ukrainian use in row over prices. Putin signed controversial law giving authorities extensive new powers to monitor the activities of non-governmental organisations and suspend them if they were found to pose a threat. In February, at least a dozen Chechen rebel fighters and several members of Russian security forces were killed in gun battle in village in Stavropol region, just across border from Chechnya. In July, Rouble became a convertible currency. Russia's most-wanted man, Chechen warlord Shamil Basayev, was killed in what the security services described as a special operation.

Mission in India: Embassy of the Russian Federation, Shantipath, Chanakyapuri, New Delhi - 110 021. Tel: 26873800, 26873802; Fax: (9111) 26876823.

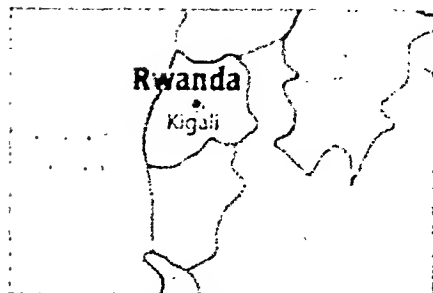
E-mail: indrusem@del2.vsnl.net.in (Embassy); indconru@del2.vsnl.net.in (Consular Dept.); Web: www.india.mid.ru

Consulate: Consulate General of the Russian Federation in Mumbai: 42, Nepean Sea Road, "Palm Beach", Mumbai-400 006; Ph: 022-2363-36-27, 2-363-36,28, 2-368-14-31, E-mail: consulgmrnl.ne.in

Consulate: Consulate General of the Russian Federation in Chennai, 14, Santhome High Road, Chennai-600 004, Tel: 091-044-498-2320/498-2330, E-mail: madrasrus@vsnl.net

Indian Mission in Russian Federation: Embassy of India, 6-8 Ulitsa Vorontsovo Polye (Obukha), Moscow (Russia). Tel: 00-7-095-9171841; Fax: 00-7-095-9752337.

E-mail: indembas@rseneubh.msk.ru



Butare; Area: 26,338 sq km; Population: 8,648,246; Languages: French, Kinyarwanda and Swahili; Religions: Roman Catholic-56.5%, Protestant-26%, Adventist-11.1%, Muslim-4.6%, indigenous beliefs-0.1%, none-1.7%; Literacy: 70.4%; Life Expectancy: 47.3; Currency: Franc (\$1= 639.26); p.c.i: \$1,500; Date of Independence: 1st July, 1962

Government Type: Republic; President: Major Gen. Paul Kagame. PM: Bernard Makuza.

History: Formerly part of the Belgian Trusteeship of Ruanda - Urundi in east-central Africa, the Republic of Rwanda became independent on July 1, 1962. One of the most densely populated countries of Africa, it is known as "the nation of a thousand hills" because of its mountainous nature.

Rwanda presents a dismal scene of ethnic fighting. For centuries, the Tutsi dominated the Hutus (90% of the population). A civil war of 1959 put an end to Tutsi power. Many Tutsi went into exile. In 1963, Tutsi exiles invaded but it resulted in a large scale massacre of Tutsi. After a coup attempt by Tutsi exiles in 1990, a multi-party democracy was established. Ethnic strife resumed and a peace accord between the government and the Tutsi rebels was signed in August, 1993. Thousands had died and the war had led to one of world's biggest movements of refugees. President Juvénal Habyarimana, along with the Burundi President, died in a suspicious plane crash in April, 1994. Ethnic violence broke out in April, 1994. Ethnic violence

146. Rwanda

(Republic of Rwanda) Republika y'u Rwanda

refugees in Western Rwanda crossed into Zaire as Tutsi rebels held 2/3 of the country. In July, the Tutsi-dominated Rwandan Patriotic Front named a Hutu, the new President. About one million Hutu refugees flooded back to Rwanda from Tanzania and Zaire in Nov. '96. Paul Kagame (sworn in Apr.2000) is the first Tutsi president of Rwanda.

Economy: The economy is agricultural and remains mainly at the subsistence level. Coffee, cotton, sorghum, cassava and sweet potatoes are the principal crops. Minerals include tin ore, tungsten, tantalite, gold and beryl. Industry is undeveloped. Food manufacturing is the chief industrial activity. Livestock raising is widespread and hides and skins are exported.

In July, 2000 an international panel set up by OAU concluded that the genocide in which 8 lakhs Tutsi people were killed was avoidable, and the Security Council didn't try to stop it.

Recent Events : In January 2006, Rwanda's 12 provinces were replaced by a smaller number of regions with the aim of creating ethnically-diverse administrative areas.

Mission In India: Embassy of the Republic of Rwanda, 41, Paschimi Marg, Vasant Vihar, New Delhi - 110 057. Tel: 5166 1604; Fax: 5166 1605.

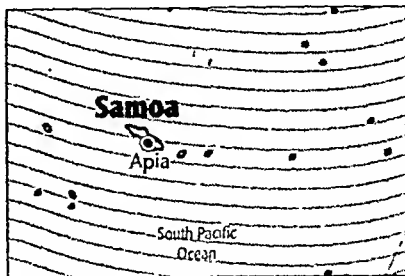
E-mail: rwandaembassy@yahoo.com and ambadelhi@minaffet.gov.rw

Indian Mission in Rwanda: Honorary Consulate General of India, M/S Sulfo Rwanda Industries, Rue de Lac Ihema, B.P. 90, Kigali, Rwanda. Tel:00-250-74556; Fax:00-250-74290.

147. Samoa (formerly Western Samoa)

(Independent State of Samoa) Malotuto'ata-sio Samoa I Sisifo

Capital: Apia; Area: 2835 sq km; Population: 176,908; Languages: Samoan and English;



Religions: Christian-99.7%; Literacy: 99.7%; Life Expectancy: 71; Currency: Tala (\$1=2.78); p.c.i: \$ 5,600 ; Date of Independence: 1st January, 1962.

Government Type: Constitutional Monarchy; **Head of State for Life:** Malietoa Tanumafili II. **PM:** Tuilaepa Sailele.

History: Samoa in South Pacific consists of the two large islands of Savaii and Upolu, the small islands of Manono and Apolima and several uninhabited islets lying off the coast. The International Dateline passes very near Samoa. Eastern Samoa (American Samoa) with its capital at Fagotogo remains a dependency of the USA. (Area: 197 sq.km.).

A former German protectorate, Samoa was administered by New Zealand from 1920 to 1961. Became fully independent on Jan.1, 1962. Has close links with New Zealand, on which it is dependent for military and economic assistance.

Economy: The economy is mainly agricultural. The chief products are fish, copra, bananas, taro, sweet potatoes, bark cloth and mats.

148. San Marino

(Most Serene Republic of San Marino)

Capital: San Marino; Other Large Cities: Seravalle, Borgo Maggiore; Area: 61 sq km; Population: 29,251; Languages: Italian; Religions: Roman Catholic; Literacy: 96% ; Life Expectancy: 81.71; Currency: Euro (\$1=0.79); p.c.i: \$ 34,600 ; Date of Independence: 3rd September, 301



Government Type: Republic

Captains-Regent: Two co-regents appointed every six months from the Great and General Council of 60 members elected every 5 years.

History: The Republic of San Marino is a landlocked state in central Italy, 20 km. from the Adriatic.

It claims to be the oldest state in Europe, having been founded in A.D. 301, and the oldest republic in the world. A communist-led coalition ruled 1947-'57, a similar coalition ruled 1978-'86. San Marino has had a treaty of friendship with Italy since 1862.

Economy: The principal products are wheat, wine and olives. Industries include textiles, ceramics, cement, paper, postage stamps, leather and woollen goods. Tourism is the major source of revenue.

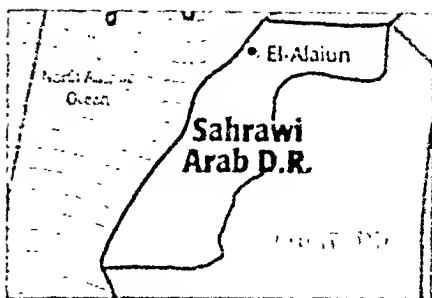
A person born in San Marino remains a citizen and can vote no matter where he lives. Women were granted the vote in 1959.

Mission In India: Honorary Consulate General of the Republic of San Marino, 15, Aurangzeb Road, New Delhi-110011. Tel: 23015850. Fax: 23019677.

E-mail: bhairs @ndb.vsnl.net.in

149. Sahrawi Arab Demo. Rep. (S.A.D.R.)

Capital: El-Alaiun; **Area:** 266,769 sq.km; **Population:** 228,100; **Languages:** Arabic; **Religions:** Islam.



President: Mohammed Abdel Aziz; **PM:** Mohamm-ed Lamine.

History: The Saharawi Arab Democratic Republic set up by the Polisario Front, a liberation movement in Western Sahara, is a territory that came under Morocco's control after Spain withdrew. Algeria supported the Polisario-led struggle for independence. India accorded recognition to the new government on Oct. 1, 1985.

The UN will conduct a referendum in Western Sahara on whether the territory should become independent or remain part of Morocco.

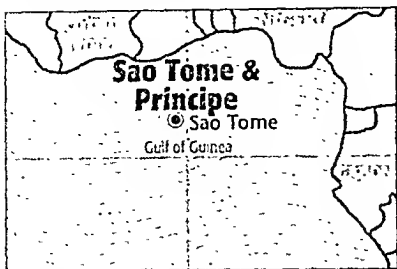
Economy: Western Sahara has rich phosphate deposits. Most of the land is desert.

Recent Events: A UN Security Council resolution has supported a proposal that Western Sahara become a semi-autonomous region of Morocco for a transition period of upto 5 years, after which the Sahrawis would decide on independence or integration. This compromise was seen as addressing Moroccan concerns, in a bid to entice it to agree to a referendum. Polisario signalled its readiness to accept, but Morocco rejected the plan, citing security concerns.

150. Sao Tome & Principe

(Democratic Republic of Sao Tome and Principe)

Capital: Sao Tome; **Area:** 964 sq km; **Population:** 193,413; **Languages:** Portuguese, native dialects like Fang; **Religions:** Catholic 70.3%, Evangelical 3.4%, New Ap



2%, Adventist-1.8%, other-3.1%, none-19.4%; Literacy: 79.3% ; Life Expectancy: 67.31; Currency: Dobra (\$1=8,825); p.c.i: \$1,200; Date of Independence: 12th July, 1975.

Government Type: Republic; President: Fradique De Menezes; PM: Tome Vera Cruz.

History: These two islands, with a few other nearby islets, lie in the Gulf of Guinea, about 200 km. from Gabon. Situated north of the equator, these islands have hot steaming weather in the summer, but plenty of rainfall. Forests cover 60% of the land area. The largest of the islands is Sao Tome, on which stands Sao Tome, the capital and chief port.

These Islands were under the Portuguese until 1975 when they became independent.

Economy: Today, the country's economy is geared almost exclusively to the production of agricultural export commodities, especially cocoa (78% of exports) and coconut products. Fishing is an important activity. Sao Tome has to import most of its food. There is virtually no manufacturing industry except soap, soft drinks etc.

151. Saudi Arabia

(Kingdom of Saudi Arabia) al-Mamlaka al 'Araiya as-Sa'udiya

Capital: Riyadh (Royal) and Jeddah (Administrative); Other Large Cities: Mecca, Damman, Medina; Area: 2,250,070 sq km; Population: 27,019,731; Languages: Arabic; Religions: Muslim-100%; Literacy: 78.8%; Life Expectancy: 75.67; Currency: Rial (SAR)

(\$1=3.75); p.c. i: \$ 12,800; Date of Independence: 23rd September, 1932

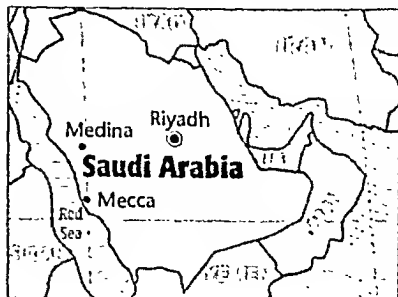
Government Type: Monarchy; Head of State & Govt: Abdallah bin Abd al-Aziz Al Saud.

History: Saudi Arabia, named after the ruling dynasty of Sa'ud, occupies nearly fourth fifths if the Arabian Peninsula.

In the province of Hejaz are Medina and Mecca (the religious capital), the holy cities of Islam. The mosque of the Prophet in Medina enshrines the tomb of Mohammed, who died in the city in 632. More than 600,000 Muslims from about 60 nations pilgrimage to Mecca, the Prophet's birthplace, every year. Of the total population, 6 m. are foreigners.

The Saudi king, whose official title is custodian of the Two Holy Mosques (at Mecca and Medina), rules as absolute monarch. His heir and deputy, the crown prince, is selected from among the Sa'ud family by its leading members in consultation with the ulama, or supreme religious council. The king governs according to Islamic law, choosing a council of ministers, many of whom are Sa'uds.

Economy: Saudi Arabia has the largest reserves of petroleum in the world (25% of the proved reserves), ranks as the largest exporter of petroleum, and plays a leading role in OPEC. The petroleum sector accounts for roughly 75% of budget revenues, 45% of GDP, and 90% of export earnings. Chief agricultural products are dates, wheat, barley,



fruit, hides and wool. Industry: Petrochemicals, fertilisers, steel, gas, plastics. New industrial cities are being built at Jubail and Yanbu on the Gulf.

Recent Events: In January 2006, 363 Hajj pilgrims were killed in a crush during a stone-throwing ritual in Mecca. In a separate incident, more than 70 pilgrims were killed when a hostel in the city collapsed. In February, the government said it had foiled a planned suicide attack on a major oil-processing plant at Abqaiq. In June, six men allegedly linked to al-Qaeda were killed in a shootout with police in Riyadh, the latest of several incidents involving Islamist militants.

Mission In India: Royal Embassy of Saudi Arabia, D-12, N.D.S.E., Part II, New Delhi-110 049. Tel: 26252470-71, 26256419; Fax: 26259333, 26257082.

Indian Mission In Saudi Arabia: Embassy of India, B-1, Diplomatic Quarter, P.B.No. 94387, Riyadh-11693, Saudi Arabia. Tel: 00-966-1-4884144, 4884691/92; Fax: 00-966-1-4884750.

E-mail:ieriyadhadmn@shabakah.net.sa

152. Senegal

(Republic of Senegal)

Capital: Dakar; **Other Large Cities:** Thies, Kaolack, St. Louis; **Area:** 196,162 sq km; **Population:** 11,987,121; **Languages:** French, Wolof and other native tongues; **Religions:** Muslim-94%, indigenous beliefs-1%, Christian-5% (Mostly Roman Catholic); **Lit-**

eracy: 40.2%; **Life Expectancy:** 59.25; **Currency:** CFA Franc (\$ 1=518.98); **p.c.i:** \$ 1,800; **Date of Independence:** 4th April, 1960.

Government Type: Republic; **President:** Abdoulaye Wade; **PM:** Macky Sall.

Senegal lies on the West African bulge. Dakar, the capital, is the westernmost point in Africa.

History: Formerly a French colony, Senegal became a self-governing republic in 1960. Senegal was a one party state from 1966 to 1974, when a pluralist system was re-established. French political and economic influence is strong. In 1981, Senegal signed an agreement with the Gambia for a confederation of the two states under the name Senegambia. The confederation, established on Feb. 1, 1982, was dissolved on Sept. 21, 1989.

Economy: Agriculture and livestock-rearing are the chief occupations. Crops: Peanuts, millet, rice. There are large deposits of iron ore and phosphate. Industry: Food processing, chemicals, textiles and fishing. A long drought brought famine in 1972-73 and in 1978.

Abdoulaye Wade became President in March, 2000, succeeding Abdou Diouf.

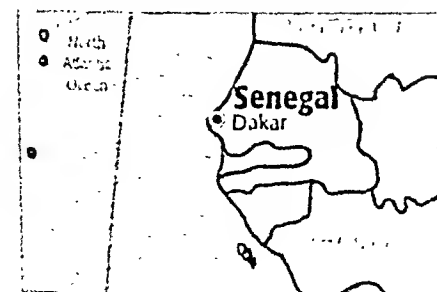
Mission In India: Embassy of the Republic of Senegal, C-6/11, Vasant Vihar, New Delhi-110057. Tel: 26147687. Fax: 24103743

Indian Mission In Senegal: Embassy of India, 5, Avenue Carde, First Floor, 8P 398, Dakar, Senegal. Tel: 00-221-8225875, 8210979; Fax: 00-221-8223585.

E-mail:indiaemb@telecomplus.sn

153. Serbia

Capital: Belgrade; **Other Large Cities:** Titograd, Novisad; **Area:** 88,361 sq. km.; **Population:** 9,396,411; **Languages:** Serbo-Croatian (official) 95%, Albanian 5%; **Religions:** Serbian Orthodox, Muslim, Roman Catholic, Protestant; **Literacy:** 96.4%; **Life Ex-**





pectancy: 74; Currency: New Dinar (\$1=57.61); p.c.i: \$ 4,400; Date of Independence: 27th April 1992.

Government Type: Republic; President (also Head of Govt.): Boris Tadic.

History: The kingdom of Serbs, Croats, and Slovenes was formed in 1918; its name was changed to Yugoslavia in 1929. Occupation by Nazi Germany in 1941 was resisted by various paramilitary bands that fought themselves as the invaders. The group headed by Marshal Tito took full control upon German expulsion in 1945. In the 1990s, Yugoslavia began to unravel itself along ethnic lines. Slovenia, Croatia and the former Yugoslav Republic of Macedonia all declared their independence in 1991; Bosnia and Herzegovina in 1992. In April 1992 Serbia and Montenegro announced the formation of a new Yugoslav Federation and invited Serbs in Croatia and Bosnia-Herzegovina to join. The United Nations imposed economic sanctions on Serbia when Serbian Military and financial aid poured into the Bosnian Serb campaign of "ethnic cleansing". In 1995 Milosevic signed the Dayton peace accord, which ended the Bosnian War. In 1996 local elections, the Serbian Socialist Party was defeated in many areas. In 1997 Milosevic was forced to acknowledge the poll results after massive demonstrations in Belgrade. He later resigned the presidency of Serbia in order to become president of Yugoslavia. In 1998 fighting erupted

in Kosovo between Albanian nationalists and Serbian forces. In 1999, following the forced expulsion of Albanians from Kosovo, Nato launched an airwar against Serbia and Montenegro to prevent a humanitarian crisis. Federal elections in the fall of 2000, brought about the ouster of Milosevic and installed Vojislav Kostunica as president. In 2002, the Serbian and Montenegrin components of Yugoslavia began negotiation to forge a closer relationship. These talks became a reality in February 2003 when lawmakers restructured the country into a loose federation of two republics called Serbia and Montenegro.

The constitutional charter of Serbia and Montenegro included a provision that allowed either republic to hold a referendum after three years that would allow for their independence from the state union. In the spring of 2006, Montenegro took advantage of the provision to undertake a successful independence vote enabling it to secede on 3rd June. Two days later, Serbia declared that it was the successor state to the union of Serbia and Montenegro.

Autonomous provinces within Serbia

Kosovo (Capital: Pristina; Area: 10887 sq.km. Population: 2m. **Vojvodina** (Capital: Novi Sad, Area: 21,506 sq.km; Population: 2,050,000).

Economy: Agricultural products: Maize, grains, sugar beets, wheat, tobacco, livestock and timber. Industry: Electricity, coal, iron, steel, cement, motor vehicles, wood products and tourism.

Misslon In India: Embassy of Serbia & Montenegro, 3/50 G Niti Marg, Chanakya-puri, New Delhi-110 021. Tel: 26873661/26872073; Fax: 26885535.

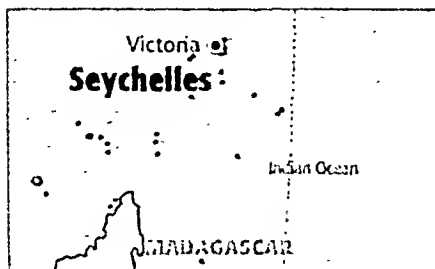
E-mail: zvezda@del2.vsnl.net.in

Indian Misslon in Serbia & Montenegro: Embassy of India, Vase Pelagica 30, Senjak,

Belgrade. Tel: 00-381-11-3692431; Fax: 00-381-11-3692435.

154. Seychelles

(Republic of Seychelles)



Capital: Victoria; Area: 308 sq km; Population: 81,541; Languages: Creole, English and French; Religions: Roman Catholic-82.3%, Anglican-6.4%, Seventh Day Adventist-1.1%, other Christian-3.4%, Hindu-2.1%, Muslim-1.1%, other non-Christian-1.5%, unspecified-1.5%, none-0.6%; Literacy: 91.9%; Life Expectancy: 72.08; Currency: Rupee (\$1=5.52); p.c.i. \$ 7,800 ; Date of Independence: 29th June, 1976.

Government Type: Republic; President & PM: James Michel.

History: Situated in western Indian Ocean, over 1100 km. off NE of Madagascar, Seychelles is a group of about 115 lovely islands. Half the islands are coral-line and the other half granitic. The principal island is Mahe on which the capital Victoria is situated. Praslin and La Digue are two other islands. Seychelles was entirely uninhabited when the French established settlements there in 1768. It was ruled as part of Mauritius from 1814. Britain seized the group of islands in 1794. In 1903, it became a separate colony. Independence was declared on June 29, 1976, and Seychelles became a one-party state in 1979. In June, 1993, a new constitution provided for a multi-party state.

The population of Seychelles is of mixed

origin, a unique blend of European, African, Indian and Chinese races. Seychelles is renowned for its fine beaches, attractive scenery and pleasant climate.

Economy: Agriculture and fishing are major occupations. Chief crops: Coconuts, cinnamon, tea, vanilla and patchouli. Industry: Food processing and fishing. Tourism is a major contributor to gross domestic product.

Mission in India: Embassy of Seychelles Stationed at Kuala Lumpur.

Honorary Consulate of Seychelles, Qutab Ambience (at Qutab Minar), H-5/12, Mehrauli Rd, New Delhi-110 030. Tel: 51666123; Fax: 51666126.

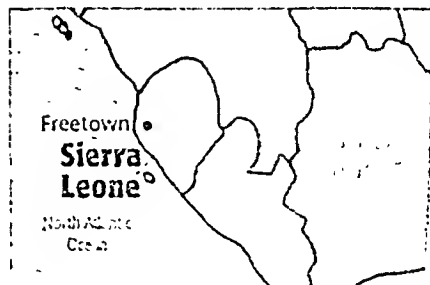
E-mail: sbm@bharti.com

Indian Mission In Seychelles: High Commission of India, Le Chantier, Post Box No. 488, Victoria, Mahe, Seychelles Tel 00-248-224489; Fax: 00-248-224810

E-mail: hicomind@seychelles.net

155. Sierra Leone

(Republic of Sierra Leone)



Capital: Freetown Area: 71,740 sq km; Population: 6,005,250 Languages: English and tribal. Religions: Muslim-60%, Indigenous beliefs-30%, Christian-10%; Literacy: 25%; Life Expectancy: 40.22; Currency: Leone (\$1=2,950); p.c.i. \$ 800; Date of Independence: 27th April, 1961.

Government Type: Constitutional Republic. Head of State & Commander in Chief: General Julius Maada Bio. Prime Minister: Ahmad Tejan Kabbah.

History: Sierra Leone (meaning mountain of the lion) was the name originally given to this area by Portuguese sailors mainly on account of the thunder-storms around its coastal peaks. It lies on the West African bulge, between Guinea and Liberia.

Formerly under British rule, Sierra Leone became independent in 1961 and a republic in 1971.

A military coup in May '97 overthrew the government of President Ahmad Tejan Kabbah. In March, '98, the junta headed by Lt. Col. Johnny Paul Koroma was ousted by Nigeria - led troops acting in the name of ECOWAS, and President Kabbah was reinstated. In July, a UN military observer mission was authorized by the Security Council. The 70-member team was to help West African peacekeepers to demobilise remnants of the former ruling junta.

The country, after nearly nine years of civil war, lies in ruins today. Nearly 10% of the population have fled to neighbouring countries. In UNDP's list of 174 countries (1999), Sierra Leone was the last. The country lost hundreds of lives in rebellion in May, 2000.

Economy: The economy is based on agriculture and mining. Main crops: Cocoa, coffee, palm kernels, rice, ginger. Minerals: Diamonds, gold and bauxite. Industry: Light engineering.

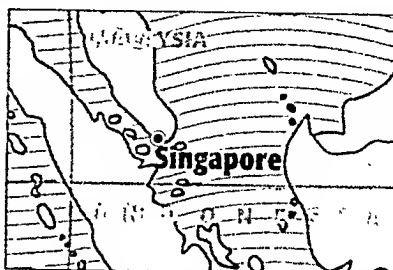
Recent Events: In April 2006, Charles Taylor, the former Liberian President faced war crimes charges in a UN-backed court in Sierra Leone over his alleged role in the country's civil war.

Mission In India: Embassy of Sierra Leone Stationed at Tehran.

Indian Mission in Sierra Leone: Honorary Consulate General of India, Post Box No. 26, 5, Rawdon Street, Freetown, Sierra Leone. Tel: 00-232-22-22452; Fax: 00-232-22-226343.

156. Singapore

(Republic of Singapore)



Capital: Singapore city; **Area:** 616.3 sq km; **Population:** 4,492,150; **Languages:** Malay, Chinese, Tamil and English; **Religions:** Buddhist (Chinese), Muslim (Malays), Christian, Hindu, Sikh, Taoist, Confucianist; **Literacy:** 92.5%; **Life Expectancy:** 81.71; **Currency:** Singapore Dollar (\$1=1.69); p.c.l.: \$ 28,100; **Date of Independence:** 9th August, 1965.

Government Type: Republic; **President:** S.R. Nathan, **PM:** Lee Hsion Loong.

Singapore is one of the smallest, most densely populated and most prosperous countries in the world. Most of the population live on Singapore island; the rest inhabit 54 neighbouring islets.

History: Modern Singapore was founded in 1819 by Sir Thomas Stamford Raffles of the British East India Company, and later became a British crown colony. It was incorporated into the Federation of Malaysia in 1963, but two years later left the federation to become an independent Republic. The population of Singapore is composite. The Chinese comprise 77%, Malays 15% and Indians 6%. Lee Kuan Yew was PM for 31 years (1959-90). S.R. Nathan, a Singaporean of Indian ethnicity was elected unopposed as the country's sixth president in Aug. '99.

Economy: The country is an entrepot for Malaysia and other southeast Asian states. It is one of the world's largest ports. The chief exports are rubber and tin. Industries include tin smelting, rubber, lumber ship-building,

textiles and oil refining, (Singapore is the largest oil refining centre in Asia) machinery, chemical products, food, tourism (7.52 m. tourists in 2001) and banking. Standards in health, education and housing are high. Only about 1.7% of the total area is used for farming. Most food is imported.

On January 1, 1996, Singapore was graduated to the status of a 'developed country' by the Organisation for Economic Cooperation and Development (OECD). In May '97, the four Asian 'tigers' (Singapore, Hong Kong, Taiwan and S.Korea) were added to the industrialised countries by IMF.

Recent Events: • Lee Hsien Loong's ruling People's Action party won general elections which were seen as the first real test of the prime minister's popularity.

Mission in India: Singapore High Commission, E-6, Chandragupta Marg, Chanakya-puri, New Delhi-110 021. Tel: 26885659, 26886506; Fax: 26886798.

E-mail: singhind@giasd101.vsnl.net.in;
Web: www.mfa.gov.sg/newdelhi

Consulate: Consulate General of the Singapore in Mumbai: 101, 10th Floor, Maker Chambers IV, 222, Jammnalal Bajaj Road, Nariman Point, Mumbai-400 021; Ph: 001-91 (22) 220-43205, 001-91 (22) 220-43209

E-mail: MFA_Mumbai@mga.gov.sg

Indian Mission in Singapore: High Commission of India, "India House", 31, Grange Road, P.O. Box No. 92, Singapore-912304. Tel: 00-65-7376777; Fax: 00-65-7326909.

E-mail: indiahc@pacific.net.sg

Website: <http://www.embassyofindia.com>

4.1%, other or unspecified-3.2%, none-13%;
Literacy: 100%; **Life Expectancy:** 74.73; **Cur-rency:** Koruna (Crown) (\$1=30.13); **p.c.I:** \$ 16,100; **Date of Independence:** 1st January, 1993.

Government Type: Parliamentary Democracy;
President: Ivan Gasparovic; **PM:** Robert Fico.

History: The Czechoslovak federal republic was dissolved on Dec. 31, 1992, and the two new republics of Czech and Slovakia were born on Jan. 1, 1993. (See Czech Republic for details).

Slovakia is bounded by Poland, Ukraine, Czech republic, Austria and Hungary.

In the former Czechoslovakia, Slovakia was less industrialised than the Czech land.

Economy: Wheat, barley, potatoes, vegetables, fruits, sugarbeet are the main agricultural products. In 1993, agriculture produced 20% of GDP.

Industry: Metallurgy, engineering, chemical, textile, glass. Main exports are chemicals, plastics, tractors and electronics items. Minerals: Coal, magnesite, metallic ore.

The Danube is the most important river. The underground ice and icicle caves are great tourist attractions, one of the largest being the Demanovska Cave of Freedom.

Recent Events: • Court intervened to end strike by doctors and nurses over pay and sell-offs in the healthcare sector.

Mission In India: Embassy of the Slovak Republic, 50-M, Niti Marg, Chanakya-puri, New Delhi-110021. Tel: 24101015, 26111075; Fax: 26877941.

E-mail: skdelhi@giasd101.vsnl.net.in



157. Slovakia

(Slovensko)

Capital: Bratislava; **Other Large Cities:** Banska, Bystrica, Zilina; **Area:** 49,036 Sq. km; **Population:** 5,439,448; **Languages:** Slovak, Magyar; **Religions:** Roman Catholic-68.9%, Protestant-10.8%, Greek Catholic -

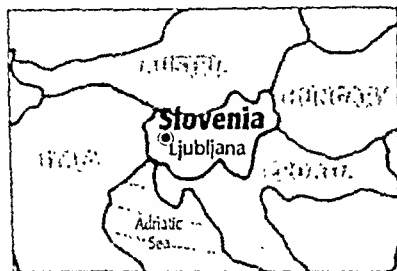
Indian Mission In Slovak Republic: Embassy of India, Radlinskeho 2, 81002, Bratislava, Slovak Republic. Tel: 00-421-7-52931700 (6lines); Fax: 00-421-7-5361690

E-mail: eindia@computel.sk

Website : www.eindia.sk

158. Slovenia

(Republic of Slovenia)



Capital: Ljubljana; Other Large Cities: Maribor, Celje, Kranj; Area: 20,251 sq.km; Population: 2,010,347; Languages: Slovenian; Religions: Catholic -57.8%, Orthodox-2.3%, other Christian-0.9%, Muslim-2.4%, unaffiliated-3.5%, other or unspecified-23%, none-10.1%; Literacy: 99.7%; Life Expectancy: 76.33; Currency: Tolar (\$1=189.6); p.c.i.: \$ 21,600 ; Date of Independence: 25th June, 1991.

Government Type: Republic; President: Dr. Janez Drnovsek; PM: Janez Jansa.

Ethnic breakdown: Slovenes - 91%. others- 9%.

History: The Slovenes settled in their current territory in 6th to 8th centuries but fell under German domination in the 9th century. After 1848, the struggle for unification began. In 1918, Yugoslavia was established, and the majority of the Slovenes entered the new state, which became the Kingdom of the Serbs, Croats and Slovenes. Slovenia, the most affluent Yugoslav republic, declared independence on June 25, 1991. In Feb. 1992,

EC granted recognition and in May, it was admitted to the UN. It is Croatia's main ally. Slovenia joined the European Union on May 1, 2004

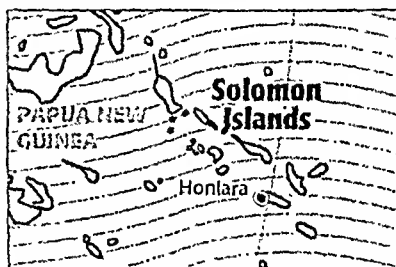
Economy: Wheat, potatoes, maize, timber, livestock are the agricultural products. Industry: Steel, textiles, electricity, motor vehicles, sulphuric acid, bauxite.

Mission in India: Embassy of the Republic of Slovenia , 46, Poorvi Marg, Vasant Vihar, New Delhi-110 057. Tel: 26151249; Fax: 26151247.

E-mail: vnd@mzz-dkp.sigov.si

159. Solomon Islands

Capital: Honiara; Area: 29,758 sq. km.; Popu-



lation: 552,438; Languages: English, Pidgin English, local languages; Religions: Church of Melanesia-32.8%, Roman Catholic-19%, South Seas Evangelical-17%, Seventh-Day Adventist-11.2%, United Church-10.3%, Christian Fellowship Church-2.4%, other Christian-4.4%, other-2.4%, unspecified-0.3%, none-0.2%; Literacy: 54%; Life Expectancy: 72.91; Currency: Dollar (\$1= 7.22); p.c.i.: \$ 1,700; Date of Independence: 7th July, 1978

Government Type: Parliamentary Democracy; Gov. Gen.: Nathaniel Waena.; PM: Manasseh Sogavare.

History: The Solomon Islands are in the South West Pacific and lie to the east of Papua New Guinea. Originally a British Protectorate, it achieved independence in 1978. It is a

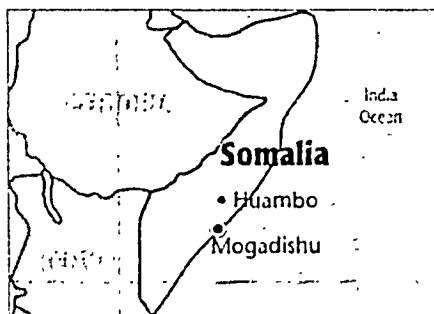
constitutional monarchy with the British Sovereign as Head of State.

The population is predominantly Melanesian.

Economy: Copra is the main cash crop and rice the chief food crop. Other crops: Bananas, yams. **Industry:** Fish canning, rice milling, food, tobacco. Fish is a vital element in food and an export item.

160. Somalia

(Somalia Democratic Republic)



Capital: Mogadishu; **Other Large Cities:** Hargeisa, Baidoa, Burao; **Area:** 637,657 sq km; **Population:** 8,863,338; **Languages:** Somali, Arabic, English, Italian; **Religions:** Sunni Muslim; **Literacy:** 37.8%; **Life Expectancy:** 48.47; **Currency:** Shilling (\$1=1,340); **p.c.i.:** \$ 600; **Date of Independence:** 1st July, 1960.

Government Type: In transition; **President:** Abdullahi Yusuf Ahmed; **PM:** Ali Muhammad Ghedi.

History: A republic in the Horn of Africa, Somali Democratic Republic was formed by the union of the former Italian Somaliland and the British Somaliland on July 1, 1960. Somalia is essentially a pastoral country, with 80% of people depending on livestock-rearing. It has 40.1 m livestock. Half the population is nomadic.

The year 1992 saw one of the worst famines in Somalia. Ravaged by civil war, the country was in a state of anarchy. Starvation

threatened 50% of the population. Over 800,000 fled to Kenya. Relief efforts were hampered by battles between rival clan factions. In Jan., 1991 President Siad Barre was toppled, ending 21 years of one-man rule. Somalia has been ruled by feud-ing warloads since the overthrow of Siad Barre.

Ali Mahdi Muhammad (United Somali Congress) became President in Aug. 1991. Interfactional fighting continued. A new coalition government under the chairmanship of Gen. Muhammad Farah Aidid agreed to a UN military presence to back up relief efforts to help famine victims (estimated at 1.5 to 2m.). In Dec. '92, leaders of two of the 14 warring factions, Ali Mahdi Muhammad and Muhammad Farah Aidid, agreed to a peace plan under the aegis of the U.N.

In March, '94, the last of the 30,000 American troops who had landed in Dec. '92 left Somalia, closing a chapter in the costliest humanitarian venture in UN history. A peace accord was signed in June, '94 by 19 Somali leaders, but violence continued. In July, '96 there was heavy fighting between Gen. Aidid's forces and the opposing alliance of self-styled interim President Ali Mahdi Mohamed. Gen. Aidid died in August. Armed factions controlled different parts of the country. President Abdiqasim Salat Hassan and 245 legislators were elected in August, 2000 at a peace conference in Djibouti.

It is estimated that the war and the famine have killed at least 350,000 Somalis. UN said in Aug. '99 that a "blackhole of anarchy" prevailed in Somalia.

In Somaliland, an unrecognised state, independent from Somalia since 1991, a vast majority voted in favour of independence from the rest of Somalia, in 2000. Somaliland has fought for the ports of Kismayo and Bossaso. After 1991, clan-based factional fighting reduced the country into several fiefdoms ruled by heavily armed clans. Puntland, unrecognised, is another

clared independence from Somalia in 1998.

Economy: Sugarcane, bananas, sorghum, maize are the main crops.

Recent Events: In February 2006, transitional Parliament met in Somalia—in the central town of Baidoa - for the first time since it was formed in Kenya in 2004. In March and May, scores of people were killed and hundreds were injured during fierce fighting between rival militia in Mogadishu. It was the worst violence in almost a decade. In June, militias loyal to the Union of Islamic courts took control of Mogadishu and other parts of the south after defeating clan warlords. Rival Somali administrations accused each other of building up supplies of arms. The Transitional Government based in Baidoa said the Islamic courts in Mogadishu were being armed by Eritrea. The Islamic Court said Ethiopian troops were in the country, supporting the government's limited forces.

Mission in India: Embassy of the Republic of Somalia, A-7, Defence Colony, New Delhi - 110024. Tel: 24619559, 24617453. Telex: 31-65010 ESDR IN

161. South Africa

(Republic of South Africa)

Capital: Pretoria (administrative); Cape Town (legislative); Bloemfontein (judicial); **Other Large Cities:** Durban, Johannesburg; **Area:** 1,223,201 sq km; **Population:** 44,187,637; **Languages:** Afrikaans, English and 9 other languages; **Religions:** Zion Christian-11%, Pen-

tecostal/Charismatic-8.2%, Catholic-7.1%, Methodist-6.8%, Dutch Reformed-6.7%, Anglican-3.8%, other Christian-36%, Islam-1.5%, other-2.3%, unspecified-1.4%, none-15.1%; **Literacy:** 86.4%; **Life Expectancy:** 42.73; **Currency:** Rand (\$1= 6.845); **p.c.i.:** \$12,000; **Date of Independence:** 31st May, 1910.

Government Type: Republic; **Head of State & Govt (President):** Thabo M. Mbeki.

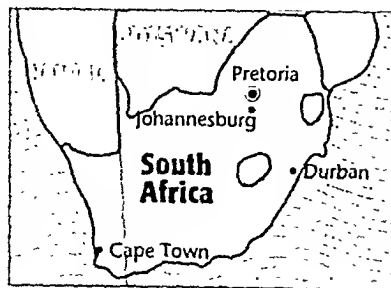
History: The Republic of South Africa lies at the southern tip of the continent of Africa. S. Africa includes the original white colonies of the Cape of Good Hope, Natal, Transvaal and Orange Free State. Formerly known as the Union of South Africa (formed in 1910), it became a republic after leaving the Commonwealth in May 1961.

The country adopted a policy of Apartheid, the separate development of racial groups. Self-government was given to Transkei, Bophuthatswana, Venda and Ciskei. There were six other homelands which were territories with a degree of self-government but still forming the part of the Republic, Kwa Zulu, Gazankulu, Lebowa, Qwaqwa, Ka Ngwane and Kwa Ndebele. The homelands ceased to exist when apartheid ended.

The year 1990 witnessed softening of the Whites' attitude towards the 26 million agitating blacks. The government lifted the ban on African National Congress, the primary black group fighting to end white minority rule, and its leader 71-year-old Nelson Mandela was released from prison after 27 years of confinement.

However, events of 1992 and 1993 once again worsened the situation and hopes of an end to the South African tragedy began thinning. Sporadic factional violence continued between supporters of ANC and the Zulu Inkatha Party.

Constitutional talks began in Dec.'91 but killings interfered, and talks re-opened in Apr. '93. In Dec. parliament adopted a transitional



constitution paving the way for a new multi-racial parliament to be elected in April '94. Thus the first general election in S. Africa on the basis of a one-person one-vote system took place on Apr. 26-28 and ANC got 62.25% of votes. On May 10, Mandela was sworn in (the first black) President. South Africa was again admitted to OAU, NAM, Commonwealth and UN General Assembly. A new South Africa was born.

The nine new provinces of South Africa are the Western Cape, the Eastern Cape, Kwazulu-Natal, the Northern Cape, Free State, North-West, Gauteng, Eastern Transvaal, and Northern Transvaal.

On May 8, 1996, South Africa's Constitutional Assembly adopted a post-apartheid constitution.

Economy: South Africa is the richest African country. The major agricultural products are cotton, wheat, maize, tobacco, sugarcane, citrus fruits and dairy products. With vast mineral resources, South Africa is the biggest gold and diamond producing country in the world and one of the biggest producers of uranium. About 47 per cent of the world's total production of gold is from South Africa. Other minerals include coal, copper, tin, manganese, iron, lead and chrome. Manufacturing industries include heavy engineering, chemicals, textiles, steel, plastic and food processing.

South Africa is the only country in the world which, having exploded a nuclear device with US collaboration renounced the nuclear path subsequently and signed both NPT and CTBT. The Truth Commission (1995) headed by Desmond Tutu investigated human rights abuses under apartheid and a report was submitted.

On July 18, 1998, Nelson Mandela married Graca Machel. He retired in June, '99. Thabo Mbeki took over on June 16.

Recent Events: In May 2006, former Deputy President Jacob Zuma was acquitted

of rape charges by the High Court in Johannesburg.

Mission in India: High Commission of the Republic of South Africa, 8 18, Vasant Marg, Vasant Vihar, New Delhi-110 057, Tel: 2614 9411-19; Fax: 2614 3605.

E-mail: sahcvisa@now-india.net.in (Visa); highcommissioner@sahc-india.com (High Commissioner).

Website: www.sahc-india.com

Indian Mission in South Africa: High Commission of India, 852, Schoeman Street, Arcadia-0083, Pretoria, South Africa. Tel: 00-27-12-3425392; Fax: 00-27-12-3425310. E-mail: dhc@iafrica.com

162. Spain

(Espana)

Capital: Madrid; **Other Large Cities:** Barcelona, Valencia, Seville; **Area:** 504,750 sq km; **Population:** 40,397,842; **Languages:** Spanish, Catalan, Basque, Galician; **Religions:** Roman Catholic-94%, others-6%; **Literacy:** 97.9%; **Life Expectancy:** 79.65; **Currency:** Euro (\$1=0.79); **p.c.i.:** \$ 25,500; **Date of Independence:** 1492.

Government Type: Parliamentary Monarchy; **Head of State:** King Juan Carlos I. **PM:** Jose Luis Rodriguez Zapatero.

History: With the discovery of America for Spain by Columbus in 1492, Spain became a great colonial empire. After the defeat of the Spanish Armada by England in 1588, Spain shrunk into a minor continental power. In



1939, it passed under the dictatorship of Gen. Franco. On Franco's death in 1975, Spain became a constitutional monarchy. In 1981, there was an unsuccessful coup attempt. The Socialist Workers' Party won four consecutive general elections from 1982 to '93. In 1996, a coalition of conservative and regional parties came to power. Spain is one of the 25 members of the European Union.

In 1980, Catalonia and the Basque country were given autonomy. Basque extremists have continued their campaign for independence. The moderate nationalist Basque party, PNV emerged triumphant in May, 2001 elections in Basque province. Basque voters made it clear that they neither favour ETA's terror campaign nor approve of Govt's no-dialogue stand.

Economy: The economy (\$828 b.) is the ninth largest in the world. Contribution of farming and fishing to overall GDP is about 4% only (This was 65% in the 60s), industry contributes 31%, and services 65%.

Main crops are cereals, grapes, olives, vegetables and fruits. Industries include chemicals, machine tools, automobiles, ship-building, steel, textiles and processed foods, paper, cement.

Recent Events: In January 2006, Lt. Gen. Jose Mena Aguado was sacked as head of army ground forces after suggesting that the military might take action in Catalonia if the region gained too much autonomy. In March, Eta declared ceasefire. In June, voters in Catalonia backed proposals to give the region greater autonomy as well as the status of a nation within Spain. In July, dozens of people were killed in an underground train crash in the eastern city of Valencia.

Mission in India: Embassy of Spain, 16, Sunder Nagar, New Delhi-110003. Tel: 24359004-7; Fax: 24359040, 24359008.

E-mail: embpain@vsnl.com

Consulate: Mumbai: Tel: 22874797, Fax: 22043625; Calcutta: Tel: 24695954, Fax:

24691283, 24692143; Chennai: Tel: 24942008, Fax: 24616978.

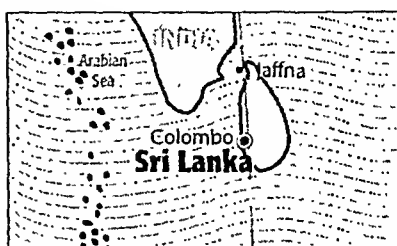
Indian Mission in Spain: Embassy of India, Avandia Pio XII 30-32, 28016, Madrid, Spain. Tel: 00-34-911-3450406, 3450265; Fax: 00-34-91-3451112 (Embassy).

E-mail: comind@accessnet.es

Website: <http://www.visualware.es/india>

163. Sri Lanka

(Democratic Socialist Republic of Sri Lanka)
Sri Lanka Prajathanthrika Samajavadi Janarajaya



Capital: Colombo; **Other Large Cities:** Kandy, Jaffna, Galle; **Area:** 65,610 sq.km.; **Population:** 20,222,240; **Languages:** Sinhala, Tamil & English; **Religions:** Buddhist-69%, Hindu-15%, Christian-8%, Muslim-7%; **Literacy:** 92.3%; **Life Expectancy:** 73.41; **Currency:** Rupee (US\$1=103.57); **p.c.i:** \$ 4,300; **Date of Independence:** 4th February, 1948.

Government Type: Republic; **President:** Mahinda Rajapakse;

Sri Lanka is an island in the Indian Ocean about 80 km east of the southern tip of India.

History: Known to the ancient world as Taprobane and later as Serendip, the island was also known as Lanka, Sinhala Deepa and Seelan at different times. Until 1972, it was Ceylon. The country became independent on 4 February 1948 and on 22 May the Republic of Sri Lanka was created.

Before the new republican constitution was promulgated, a youth insurrection in April

1971 rocked prime minister Sirimavo Bandaranaike's (world's first woman PM) United Front government, leading to her imposing several harsh socialist measures. By the 1977 general election, a country tired of endemic scarcities and rising prices swept her out of office.

The United National Party (UNP) administration of Prime Minister Junius Jayewardene which took over, replaced the 1972 constitution and Jayewardene assumed unprecedented power as executive president, becoming both head of state and head of government. He was elected to a second six-year term in October 1982, and in a referendum won a mandate to extend parliament to 1989. In late 1988, former prime minister Ranasinghe Premadasa was elected executive president for a 6-year term.

The Tamils in Sri Lanka have been fighting for more power for over a decade. In 1978, some concessions such as the recognition of the Tamil language were made. TULF - Tamil United Liberation Front - spearheaded the agitation. Later more militant organisations like the LTTE - Liberation Tigers of Tamil Eelam - and EPRLF - Eelam People's Revolutionary Liberation Front joined the struggle. More than 54,000 have died in the civil war.

On 29 July 1987, however, an important breakthrough was made when President Jayawardene and the Indian PM, Rajiv Gandhi signed an accord regarding a settlement of the country's ethnic crisis. Accordingly an IPKF - Indian Peacekeeping Force - was sent to the island to end the hostilities and supervise surrender of arms. After a long period of bloody military operation, the IPKF started pulling out its forces on Sept. 20, 1989.

In November, Parliament adopted the legislation establishing provincial councils. In the election held in the North Eastern Province under the Peace Plan, Varadaraja Perumal of EPRLF became Chief Minister.

President Ranasinghe Premadasa lifted the

emergency after more than 5½ years on January 11, 1989 and general elections were held in February. United National Party won and the former Finance Minister D.B. Wijetunge was appointed Prime Minister.

President R. Premadasa, 69, was assassinated by a suicide bomber on May 1, 1993 and the Prime Minister D.B. Wijetunge, 71, was elected President. Ranil Wickremesinghe was appointed Prime Minister.

Parliamentary elections were held on 19 August 1994, and Chandrika Kumaratunga formed the government.

After the Presidential elections of 9 Nov., Chandrika Kumaratunga became President. Under the new government, her mother Sirimavo Bandaranaike was made Prime Minister. Mrs. Bandaranaike died on Oct. 10, 2000.

War between northern Tamil separatists and govt. forces continued, in spite of a ceasefire of Jan. 3, 1995. In Jan. '98, the govt. outlawed LTTE. Jaffna Mayor Ms. Sirojini Yogeswaran was assassinated by LTTE in May. In Aug., the public emergency was extended to all over Sri Lanka.

Economy: Sri Lanka's predominantly rural population is concentrated in the west, south and south-west regions, where rubber, tea and coconuts are grown. About one-half of the working population are engaged in agriculture, forestry and fishing, and only agriculture provides 21% of the gross domestic product (GDP). Of the total area of 6,561,000 hectares, about 2m. hectares are under cultivation. Agriculture engages about 45% of the labour force. The main crops are paddy, rubber, tea and coconuts.

In 1978, Sri Lanka was the world's largest exporter of tea, when tea, rubber and coconut together contributed about 70% of total export earnings. This position gradually declined. However, early 1990s showed signs of revival. The 1993-97 plan aimed at a 7% annual growth rate. The main industries are food, beverages, tobacco, textiles,

and leather goods, chemicals, petroleum, rubber and plastics. Principal exports are tea, rubber, copra, coconut oil and desiccated coconut, textiles and garments, precious and semi-precious stones. Gems are among the chief minerals mined and exported. Principal imports are petroleum, machinery and equipment, vehicles transport equipment and food and beverages.

Experimental television broadcasting began in April 1979. Roopavahini, a national television network was established, with stations at Mount Pidurutalagala, Kokavil and Kandy, from which telecasting began in December 1982.

Recent Events: In February 2006, government and Tamil Tiger rebels declared their respect for the 2002 ceasefire at talks in Geneva. In April, explosions and rioting in Trincomalee, in the north-east, left 16 people dead. Police blamed Tamil Tiger rebels for the blasts, which came amid a marked escalation in deadly violence. In June, 64 people were killed in a mine attack on a bus in Anuradhapura district. Days later, more than 30 people were killed in a land and sea battle between government forces and Tamil Tiger rebels.

Mission in India: High Commission for the Democratic Socialist Republic of Sri Lanka, 27-Kautilya Marg, Chanakyapuri, New Delhi - 110021. Tel. 23010201-03; Fax: 23793604.

E-mail: lankacom@del2.vsnl.net.in

Deputy High Commission of the Democratic Socialist Republic of Sri Lanka, 196, T.T.K. Road, Alwarpet, Chennai- 600 018. Tel. 4987896, 4987612; Fax: 4987894.

India: Mumbai

E-mail: sldehico@md3.vsnl.net.in

Consulate: Consulate General of the Democratic Socialist Republic of Sri Lanka "Sri Lanka House", 34 Horni Mody Street Mumbai - 400 023, India. Tel : 2045861, 204803; Fax: 2876132

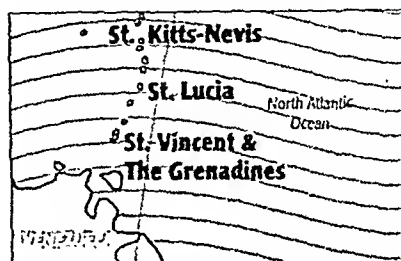
E-mail: slcon@bom5.vsnl.net.in

Indian Mission in Sri Lanka: High Commission of India, 36-38, Galle Road, P.O.Box No. 882, Colombo 3, Sri Lanka. Tel: 00-94-1-421605, 422788, 422789; Fax: 00-94-1-446403, 448166.

E-mail: hcicmbpl@sri.lanka.net

164. St. Kitts-Nevis

(Federation of St. Kitts and Nevis)



Capital: Basseterre; **Area:** 269 sq km; **Population:** 39,129; **Languages:** English and Patois; **Religions:** Anglican, Other Protestant, Roman Catholic; **Literacy:** 97.8% ; **Life Expectancy:** 72.4; **Currency:** East Caribbean Dollar (\$1= 2.66); **p.c.i.:** \$ 8,800; **Date of Independence:** 19th September, 1983.

Government Type: Constitutional Monarchy; **Gov. Gen.:** Cuthbert M. Sebastian. **PM:** Dr. Denzil Douglas.

History: St. Christopher (Kitts)-Nevis is two islands in East Caribbean separated by a narrow channel 3.2 km wide. The islands were given the status of an Associate State of the U.K. in 1967 and became independent on Sept. 19, 1983. At that time Anguilla was part of St. Kitts-Nevis. The Anguillians revolted against this arrangement and Anguilla was separated. Nevis has the right of secession.

In August, '98, the 62% of people of Nevis (population: 9000) voted in favour of leaving the federation, but failed to reach the two-thirds majority needed for secession.

The population is mostly black.

Economy: The economy is agricultural, cotton and sugar being the principal crops. Industries: Sugar, construction, clothing, tourism.

165. St. Lucia

Capital: Castries; **Area:** 616 sq km; **Population:** 168,458; **Languages:** English and French patois; **Literacy:** 80%; **Religions:** Roman Catholic-67.5%, Seventh Day Adventist-8.5%, Pentecostal-5.7%, Anglican-2%, Evangelical-2%, other Christian-5.1%, Rastafarian-2.1%, other-1.1%, unspecified-1.5%, none-4.5%; **Literacy:** 90.1%; **Life Expectancy:** 73.84; **Currency:** East Caribbean Dollar (\$1=2.70); **p.c.i.:** \$ 5,400; **Date of Independence:** 22nd February, 1979.

Government Type: Parliamentary Democracy; **Gov. Gen.:** Calliopa P. Louisy; **PM:** Kenny Anthony.

History: St. Lucia, in Eastern Caribbean, is the second largest island in the Windward group. Volcanic in origin. St. Lucia was ceded to Britain by France in 1814. Self-government was granted in 1967. It became independent on Feb. 22, 1979. There is a 17-seat House of Assembly.

Economy: The economy is agricultural, coconut, bananas and cocoa being the main crops. Manufactures include soap, plastics, garments and beer.

166. St. Vincent & The Grenadines

Capital: Kingstown; **Area:** 388 sq km; **Population:** 117,848; **Languages:** English and French Patois; **Religions:** Anglican-47%, Methodist-28%, Roman Catholic-13%, Hindu, Seventh-Day Adventist, Other Protestant; **Literacy:** 96%; **Life Expectancy:** 73.85; **Currency:** East Caribbean Dollar (\$1=2.70); **p.c.i.:** \$ 2,900; **Date of Independence:** 27th October, 1979.

Government Type: Parliamentary Democracy; **Gov. Gen:** Sir Fredrick Nathaniel Ballantyne; **PM:** Ralph E Gonsalves.

History: One of the Windward islands, west

of Barbados, St. Vincent became a British associated State in 1969 and achieved independence on Oct. 27, 1979.

St. Vincent (345 sq.km.), chief island of the chain, is dominated by the volcano Soufriere. (It erupted in 1979). The Grenadines is a chain of islets with a total area of 43 sq.km.

The population is of mixed origin: European-Negro and Carib-Indian.

Economy: Bananas, arrowroot, copra, sisal. Island cotton and spices are the main products. **Industry:** Food-processing, electronic equipment assembly, garments, tourism.

167. Sudan

(Republic of the Sudan) Jumhuriyat as-Sudan



Capital: Khartoum; **Other Large Cities:** Omdurman, Port Sudan; **Area:** 2,505,813 sq km; **Population:** 41,236,378; **Languages:** Arabic, English, Dinka, Nubian etc.; **Religion:** Sunni Muslim-70% (in the north), indigenous beliefs-25%, Christian-5% (mostly in the south and in Khartoum); **Literacy:** 61.1%; **Life Expectancy:** 58.92; **Currency:** Dinar (\$1=219.145); **p.c.i.:** 2,100; **Date of Independence:** 1st January, 1956.

Government Type: Republic with strong military influence; **Head of State and Gov. (President):** Lt. Gen. Omar Hassan al-Bashir.

History: The Sudan, the largest African country, is a republic in north east Africa. The White Nile flows through the middle of the country and joins the Blue Nile at Khartoum.

Sudan became a sovereign independent republic in Jan., 1956.

The 12 northern provinces are predominantly Arab-Muslim, and the 3 southern provinces are populated largely by Christians and animists.

The Sudanese People's Liberation Army (SPLA) (the mainstream rebel group which has been fighting for 16 years to free mainly Christian and animist south Sudan from domination by Islamic, Arabised north) maintains guerilla activities in the south. 1.5m. people have been dead from violence and famine.

In Apr. '97, Sudan's Islamic government and four southern rebel groups signed a peace treaty to end the civil war, by which a referendum is to be held after four years for Southerners to decide whether to secede or remain in Sudan. Famine and starvation were reported to be the worst in 1998. UN World Food Programme were flying in food as SPLA called a unilateral ceasefire in their fight with the north. Peace talks in Addis Ababa failed in August.

Economy: The main agricultural crop sorghum is the country's staple food and cotton is the most important cash crop and main export. Other products include gum arabic (world's principal producer), sugarcane, sesame, peanuts, dates, hides and skins, chillies, beans and corn. Forests cover about one-fifth of the land area, and most productive woodland is state-owned. Sudan's mineral wealth includes copper, gold, iron and oil. **Industry:** Textiles, food processing.

Recent Events: In May, Khartoum government and the main rebel faction in Darfur signed a peace accord. Two smaller rebel groups rejected the deal. In July, US President George Bush renewed calls for UN peacekeepers to be allowed into Darfur, saying the existing African Union troops needed to be complemented.

Mission in India: Embassy of the Republic of Sudan, Plot No.3, Shantipath,

Chanakyapuri, New Delhi-110021. Tel: 26873785, 26873746; Fax: 26883758.

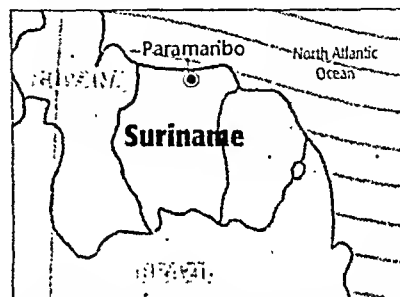
E-mail: sudandel@del3.vsnl.net.in

Indian Mission in Sudan: Embassy of India, P.O. Box 707, 61-Africa Road, Khartoum-II, Sudan. Tel: 00-249-11-451202, 451031; Fax: 00-249-11-472266.

E-mail: indembsdn@yahoo.com/india2sudan@yahoo.com

168. Suriname

(Republic of Suriname)



Capital: Paramaribo; **Area:** 163,820 sq km; **Population:** 439,177; **Languages:** Dutch, English, Hindi, Sranantongo (Suri-nameese) and Javanese; **Religions:** Hindu-27.4%, Muslim-19.6%, Roman Catholic-22.8%, Protestant-25.2% (predominantly Moravian), indigenous beliefs-5%; **Literacy:** 88%; **Life Expectancy:** 69.01; **Currency:** Gulden/Suriname Guilder (\$1= 2.74); **p.c.i.:** \$ 4,100; **Date of Independence:** 25th November, 1975.

Government Type: Republic; **President:** Ronald Venetiaan; **Vice President & PM:** Ram Sardjoe

History: Suriname, formerly Dutch Guyana, lies on the north east coast of South America. It became independent in 1975.

A Military Council came to power in 1982. In 1987 civilian rule was restored. Political turmoil continued, with its adverse effects on the economy.

A boundary dispute between Suriname

nd Guyana flared in June, 2000.

Ethnic groups: Creole 35%; Indian 33%;
vanese 16% Bushnegroes (Blacks) 10%;
merindian 3%.

Economy: The economy is very dependent
n exports and imports. Much of the land is
iven to rice cultivation, managed by
industanis. The country is rich in bauxite.
auxite, alumina and aluminium constitute
early 80% of the exports. Industry: Alu-
minium, processed foods, lumber.

Mission in India: Embassy of the Republic
f Suriname, C-15, Malcha Marg, Chanakya-
uri, New Delhi-110 021; Tel: 26888435,
6888454; Fax: 26888450.

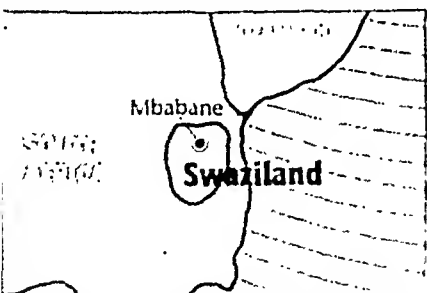
E-mail: emsurnd@mantraonline.com

Indian Mission In Suriname: Embassy of In-
lia, 10, Rode Kruislaan, Post Box No. 1329,
aramaribo, Suriname. Tel: 00-597-498344,
98018; Fax: 00-597-491106.

E-mail: ambindia@sr.net /india@sr.net.

169. Swaziland

(Kingdom of Swaziland) Umbuso weSwatini



Capital: Mbabane; **Other Large Cities:**
Lobamba, Manzini; **Area:** 17,363 sq km,
Population: 1,136,334; **Languages:** English
and Swazi; **Religions:** Zionist (a combination
of Christianity and indigenous ancestral wor-
ship) -40%, Roman Catholic-20%, Muslim-
10%.; **Literacy:** 81.6%; **Life Expectancy:**
32.62; **Currency:** Lilangeni (pl.-emalungeni,
(\$1=6.84); **p.c.i.:** \$ 5,000; **Date of Indepen-**
dence: 6th September, 1968.

Government Type: Constitutional Monar-
chy; **Head of State:** King Mswati III. **PM:**
Absdom Themba Dlamini.

Swaziland is surrounded almost entirely by
South Africa. Mozambique to the east is its
only other neighbour.

History: Swaziland, formerly a British pro-
tectorate, attained independence on Sept. 6,
1968. In 1973, the king assumed full pow-
ers. Political parties were banned in 1978. The
1990s saw moves towards a multiparty sys-
tem.

The royal house of Swaziland is one of
Africa's last ruling dynasties. The population
is homogenous, of Nguni descent.

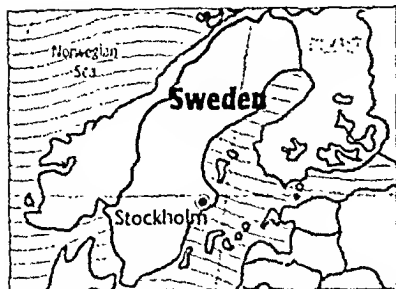
Economy: Sugar is the principal item in the
economy, with citrus fruits, cotton, rice and
maize, coming next. But the main wealth
of the Swazis is cattle. There are consider-
able mineral reserves, especially, asbestos,
iron and coal. Industry: Wood pulp, cotton
ginning and meat processing.

Recent Events: In March 2006, 16 opposi-
tion activists from the banned Pudeno party
were freed on bail after being charged in De-
cember and January over series of petrol
bomb attacks. The European Union banned
more than 90 airlines, including six registered
in Swaziland, in a move to boost air safety. In
April, South African police fired at protesters
trying to blockade a border crossing with
Swaziland to demand political reform there.

Mission in India: Embassy of Swaziland
situated at Kuala Lumpur.

170. Sweden

(Kingdom of Sweden) Konungariket
Capital: Stockholm; **Other**
Goteborg, Malmo, Uppsala
sq km. **Population:** 9,015,511
Swedish. **Religions:** Lutheran
Catholic, Orthodox, Jewish
Buddhist, **Literacy:** 99%
30 51 **Currency:**



\$29,800; Date of Independence: 6th July, 1523.

Government Type: Constitutional Monarchy; **Head of State:** King Carl XVI Gustaf. **PM:** Goran Persson.

History: Sweden which occupies the eastern part of the Scandinavian peninsula, is the largest of the Nordic countries and in terms of area, the fourth largest country in Europe. Mountains cover 25% of the country. A constitutional monarchy since 1434, Sweden is the world's first widely comprehensive welfare state. Stockholm is known as "Beauty on the Sea".

Economy: Sweden has rich natural supplies of coniferous forest, water power, iron ore and uranium.

Highly industrialised, Sweden today exports 40% of its industrial production. Major industries: Steel, machinery, instruments, autos, ship building and paper. Main crops: Grains, potatoes, sugar beets and dairy products. Forests (half the country) yield 16% of exports.

Sweden entered the EU on Jan. 1, 1995 but decided against joining NATO.

In 2000, Sweden voted in favour of adopting euro as its currency.

Recent Events: Foreign Minister Laila Freivalds resigned amid row over her ministry's involvement in closure of website which had been due to publish controversial cartoons depicting prophet Mohammad.

Mission in India: Embassy of Sweden, Nyaya Marg, Chanakyapuri, New Delhi-110

021. Tel: 24197100; Fax: 26885401, 26885540.

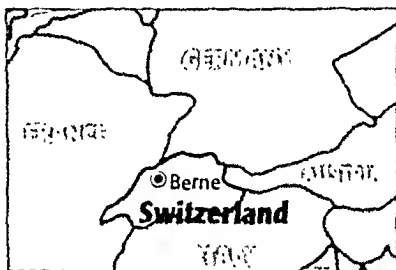
E-mail: ambassaden.new-delhi@foreign.ministry.se Web: www.swedenembindia.com

Indian Mission in Sweden: Embassy of India, Adolf Fredriks Kyrkogata 12, Box 1340, 111 83 Stockholm, Sweden. Tel: 00-468-107008; Fax: 00-468-248505.

E-mail: information@indianembassy.se

171. Switzerland

(Swiss Confederation)



Capital: Berne; **Other Large Cities:** Zurich, Basel, Geneva, Lausanne; **Area:** 41,293 sq.km.; **Population:** 7,523,934; **Languages:** German, French, Italian and Romansch; **Religions:** Roman Catholic-41.8%, Protestant-35.3%, orthodox-1.8%, other Christian-0.4%, Muslim-4.3%, other-1%, unspecified-4.3%, none-11.1%; **Literacy:** 99%; **Life Expectancy:** 80.51; **Currency:** Franc (\$1 = 1.23); **p.c.i.:** \$ 32,300; **Date of Independence:** 1st August, 1291.

Government Type: Federal Republic; **President:** Moritz Leuenberger

Switzerland, a Confederation in Central Europe is a mountainous country, with the Alps covering 60% of the land area. The country is famous for its lakes. About one-fourth of the area is covered by mountains and glaciers.

History: Since 1291, Switzerland (called Helvetia in ancient times) has remained a completely independent country, and has not

been involved in a foreign war since 1515. The president is elected to a nonrenewable one-year term. It is a multi-lingual state with most people speaking more than one language. It has 1.24 million foreign residents. In a referendum in 1986, the electorate voted against joining the UN. In 1971, women were given the vote in federal elections and the right to hold federal office. Switzerland joined (June '97) NATO's security cooperation pact called the Partnership for Peace.

Economy: The Swiss terrain offers little scope for farming. Nearly half the nation's food has to be imported. Mountain slopes provide pasture for beef and dairy cattle. Crops include grains, potatoes, sugar beets, vegetables, fruits and wine. Forests help by providing plenty of wood. From the earliest times, Switzerland has been famous for its cottage industries-high quality products but no large-scale production. Agricultural sector forms only 3.2% of GNP.

Swiss-made watches and clocks are famous the world over. Precision tools and machines form another specialised industry. Fabrics and lace are part of Switzerland's image. Other industries: Steel, textiles, food-stuffs (cheese, chocolate), chemicals, drugs, banking. The engineering, electrical and metal industry accounts for 45% of total exports. Minerals: Salt. The availability of electric power in every cottage has fostered growth of all kinds of small industries throughout Switzerland. Domestic and international tourism are important factors in the Swiss economy. Of a total revenue of 22.4 billion Swiss Francs in 2001, 9.7 billion (or 43%) came from domestic tourism. Expenditure by foreign visitors in Switzerland added some 12.7 billion Swiss Francs (3% of GDP). Switzerland is a leading world banking centre and the seat of many UN and other international agencies. The nation's strict bank-secrecy rules have been eased since 1990. Geneva was the headquarters of the League of Nations.

Swiss voters approved the modernisation of the country's 125-year old constitution in April, 99. The new document enshrined new rights, including the right to strike.

Mission in India: Nyaya Marg, Chanakyapuri, New Delhi-110 021. Tel: 26878372-74, 26878534; Fax: 26873093.

E-mail: Vertretung@ndh.rep.admin.ch

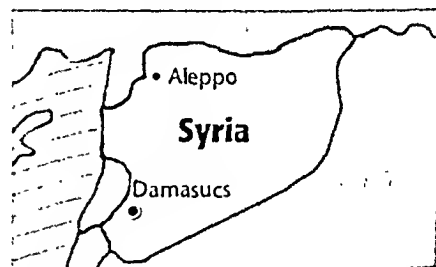
Consulate: Mumbai: 102, Maker Chambers's IV, 10th Floor, 222, Jamna Lal Bajaj Marg, Nariman Point, Mumbai-400 021, Tel: +91 22-22884563-5/22831738, E-mail: vertretung@mum.rep.admin.ch

Indian Mission in Switzerland: Embassy of India, Kirchenfeldstrasse 28, Postfach 406, CH-3000, Berne-6, Switzerland. Tel: 00-41-31-3511110; Fax: 00-41-31-3511557.

E-mail: india@spectraweb.ch

172. Syria

(Syrian Arab Republic)



Capital: Damasucs; **Other Large Cities:** Aleppo, Homs, Hama; **Area:** 185,180 sq.km.; **Population:** 18,881,361; **Languages:** Arabic, Kurdish, Armenian; **Religions:** Sunni Muslim-74%, Alawite, Druze, and other Muslim sects-16%, Christian (various sects)-10%, Jewry; **Literacy:** 76.9% ; **Life Expectancy:** 70.32 ; **Currency:** Syrian Pound (\$1=5221; Feb 8 3,900 ; **Date of Independence:** 17th April, 1946.

Government Type: Republic (under military regime); **President:** Bashar al-Assad; **Prime Minister:** Muhammad Naji al-Oudh

The Syrian Arab R

at the eastern end of the Mediterranean Sea. The Orontes and Euphrates rivers pass through Syria. The chief seaport is Latakia.

History: Syria, the seat of an ancient civilization, became a fully independent sovereign republic in 1946.

Syria joined with Egypt in 1958 in the United Arab Republic but seceded in 1961. Principal towns are Damascus, Aleppo and Homs.

Syria has been involved in the Arab-Israeli conflict since 1948. Syria's negotiations with Israel haven't made much headway.

Economy: Agriculture and cattle-breeding comprise the major occupations of the people. The chief crops are cotton, wheat, tobacco and olives. Minerals: Oil, phosphate, gypsum. Industries include oils, soap, textiles, leather, tobacco, sugar and glassware.

Recent Events: In February 2006, Danish and Norwegian embassies in Damascus were set on fire during a demonstration against cartoons in a Danish newspaper satirising the prophet Muhammad. In July, thousands of people fled into Syria to escape Israel's bombardment of Lebanon.

Mission in India: Embassy of Syrian Arab Republic, D-S/8, Vasant Marg, Vasant Vihar, New Delhi - 110057. Tel: 26140233; Telefax: 26143107.

Indian Mission In Syria: Embassy of India, 4046, Adnan Malki Street, Yassin Nouwelati Building, P.O. Box 685, Damascus, Syria. Tel: 00-963-11-3739081/83; Fax: 00-963-11-3316703.

E-mail: indembasy@cyberia.net.lb

173. Taiwan

(Republic of China) Chung-hua Min-kuo
Capltal: Taipei; Other Large Cities: Kaohsiung, Taichung ; Area: 35,981 sq.km.; Population: 23,036,087; Languages: Mandarin Chinese, Taiwan, Hakka dialects; Religions: Buddhist, Confucian and Taoist-93%, Chris-

tian-5%; Literacy: 96.1%; Life Expectancy: 77.43; Currency: New Taiwan Dollar (\$1=32.467); p.c.i: \$ 27,600.

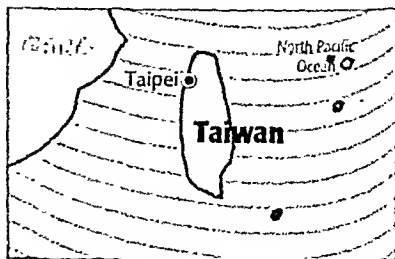
Government Type: Democracy; President: Chen Shui-bian. PM: Su Tseng-chang

Taiwan, off southeast coast of China and formerly known as Formosa, includes the island of Taiwan, two off-shore islands Quemoy and Matsu, and the nearby islets of the Pescadores chain.

History: Originally Taiwan and adjoining areas were Chinese territory. In 1950, Chiang Kai Shek made Taiwan the headquarters of the Nationalist Republic of China. Although Taiwan still claims to be the legal government of China it lost its membership in the UN and its permanent seat in the Security Council to Communist China in 1971. In 1987, martial law was lifted after 38 years and in 1991, the 43-year period of emergency rule ended. In May, '96 Lee Teng-Hui stormed to a resounding victory in the island's first direct presidential election.

Taiwan has one of the world's strongest economies and is among the 10 leading capital exporters. Taiwan has foreign exchange reserves worth over \$175 b.

According to an official source, Taipei wants to be reunited with China, but not at present. Taiwan is interested in joining international organisations. In Aug. '99, China accused Taiwanese President Lee Teng-Hui of taking a 'dangerous' step towards splitting the country. Teng-Hui said 'One China' was possible but only under a democratic



union with China's mainland. China threatened to invade Taiwan if the President's statehood call was made the official stand.

Economy: The main agricultural products are rice, tea, sugar, sweet potatoes, bananas, jute and turmeric. Camphor secured from forests is a government monopoly. Industries comprise iron works, glass, soap, textiles, clothing, electronics, chemicals, plastics and processed foods. Coal, marble, petroleum and natural gas are the principal minerals. Taiwan has made big progress in agriculture and industry and the living standards have gone high, as a result of land reform, government planning, free universal education and U.S. aid and investment.

More than half a century of Nationalist Party rule ended when Opposition leader Chen Shui-bian (Democratic Progressive Party) was elected in March, 2000).

Recent Events: In February 2006, Taiwan scrapped the National Unification Council, a body set up to deal with reunification with the mainland. China said the decision could bring "disaster". Under pressure over corruption allegations against a family member, President Chen ceded some of his powers to the Prime Minister.

174. Tajikistan

(Republic of Tajikistan)

Capital: Dushanbe; **Other Large Cities:** Khudzand, Kulyab; **Area:** 143,100 sq.km.; **Population:** 7,320,815; **Languages:** Tadjik,

Russian; **Religions:** Sunni Muslim-85%, Shi'a Muslim-5%; **Literacy:** 99.4%; **Life Expectancy:** 64.94; **Currency:** Tajik Ruble (\$1=3.23); **p.c.i:** \$ 1,200; **Date of Independence:** 9th September, 1991.

Government Type: Republic; **President:** Imamali Rakhmonov; **PM:** Akil Akilov.

History: A former Soviet republic that became independent in 1991, Tajikistan is bordered by Uzbekistan, Kirghizia, China and Afghanistan.

People who speak an Iranian dialect similar to Persian are considered to be the descendants of the original Aryan population of Turkestan.

In Nov. '92, Parliament voted to abolish presidency and instal a parliamentary republic. A pro-communist regime came in Jan. '93. In Nov. '94, a constitution establishing a presidential system was approved. Muslim rebels continued to fight the regime.

In June '97, government and opposition leaders signed a peace treaty ending five years of bloody civil war. In August, fighting was reported among pro-government warlords. Russia supported President Rakhmonov.

Economy: Farming, horticulture and cattle breeding are the main occupations. **Products:** Grain, potatoes, vegetable, fruit, grapes, meat, milk, eggs, wool, cotton. **Natural resources:** Brown coal, lead, zinc, oil, uranium, radium, arsenic. **Industry:** Mining, engineering, food, textile, clothing, silk, bricks, ferro-concrete, knitwear, footwear.

Recent Events: In January 2006, 20 people were killed when an avalanche engulfed an apartment block in mountainous region northeast of Dushanbe. Gaffor Mirzoyev, former top military commander, was sentenced to life imprisonment in August after being convicted on charges of terrorism and plotting to overthrow government. His supporters said the trial was politically motivated.

Misslon In India: Hon. C



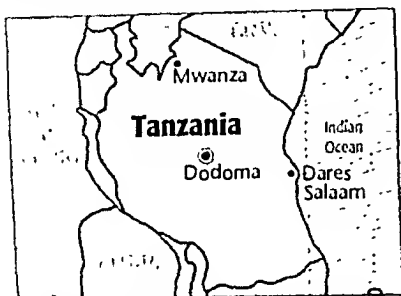
Tajikistan, Hotel Crowne Plaza Surya, New Friends Colony, New Delhi-110 065. Tel: 26835070 Extn: 1155 & 1220; Fax: 26836288.

Indian Mission In Tajikistan: Embassy of India, 45, Bukhoro Street (Formerly Sveridenko Street), Dushanbe, Tajikistan. Tel: 00-992-372-217172, 211803; Fax: 00-992-372-510045, 510035.

E-mail: eo@netrt.org

175. Tanzania

(United Republic of Tanzania)



Capital: Dodoma; Other Large Cities: Dar es Salaam, Mwanza; Area: 945,087 sq.km.; Population: 37,445,392; Languages: Kiswahili and English; Religions: Mainland-Christian-30%, Muslim-35%, indigenous beliefs-35%, Zanzibar-99% Muslim; Literacy: 78.2%; Life Expectancy: 45.64; Currency: Shilling (\$1=1,269); p.c.i: \$ 700; Date of Independence: 26th April, 1964

Government Type: Republic; President: Jakaya Kikwete.

History: The United Republic of Tanganyika and Zanzibar was constituted on April 26, 1964 (named Tanzania on Oct. 29), when the Republic of Tanganyika in East Africa and the island Republic of Zanzibar ('the Isle of Cloves'), off the coast of Tanganyika, joined into a single nation.

Three of Africa's best-known lakes-Victoria, Tanganyika and Nyasa-and Mount Kilimanjaro - the highest in Africa - are in Tanzania.

President Julius K. Nyerere dominated Tanzanian politics until he resigned in 1985. In 1967, the government set on a socialist course, and nationalised banks and many industries.

The country firmly abandoned socialist policies and switched over to a market-based system more than 14 years ago. Privatisation of the economy was undertaken in the 1990s. The process of economic recovery, however, has been painfully slow.

Economy: The economy is agricultural. The chief cash crops are sisal, sugarcane, cotton, tea, tobacco and coffee. Cloves are grown on the islands, chiefly in Pemba. Livestock is extensively raised. Diamonds are an important export. Other minerals include gold, tin and salt. Industry: Food processing and clothing.

Recent Events: In April 2006, High Court outlawed traditional practice of entertaining candidates during elections. Critics of "Takrina" - the giving of tips-said it encouraged corruption.

Mission In India: High Commission for the United Republic of Tanzania, 10/1, Sarv Priya Vihar, New Delhi-110 016; Tel: 26853046-47; Fax: 26968408.

E-mail: tanzrep@del2.vsnl.net.in

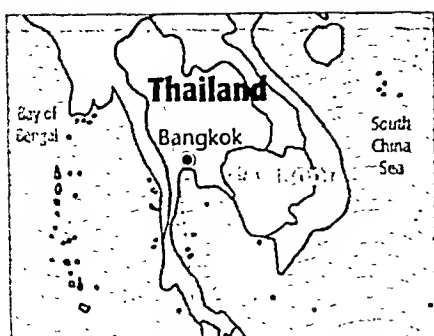
Indian Mission In Tanzania: High Commission of India, NIC Investment House, Samora Avenue, 7th & 8th Floor, Wing 'A', P.O. Box 2684, Dar-es-Salaam, Tanzania. Tel: 00-255-22-2117175; Fax: 00-255-22-2118761/2116551.

E-mail: hcitz@cats.net.com

176. Thailand

(Kingdom of Thailand) Muang Thai or Prathet Thai

Capital: Bangkok; Other Large Cities: Songkhla, Chiang Mai; Area: 513,115 sq.km.; Population: 64,631,595; Languages: Thai, Lao, Chinese, English and Malay; Religions:



Buddhist-94.6%, Muslim-4.6%, Christian-0.7%, others-0.1%; Literacy: 92.6%; Life Expectancy: 72.25; Currency: Baht (\$1=38.46); p.c.l: \$ 8,300 ; Date of Independence: 1238.

Government Type: Constitutional Monarchy; **Head of State:** King Bhumibol Adulyadej **Abldet:** PM: Thaksin Shinawatra.

Thailand, formerly known as Siam, is a southeast Asian country.

History: An ancient autocracy, it became a constitutional monarchy in 1932. In 1948, the country assumed its present name Thailand. It is the only southeast Asian country never taken over by a European power. The military took over the government in a bloody 1974 coup. In 1988, there was a democratic election but again military came to power in 1991. General elections were held in July, '95.

Thailand was well on its way to joining the club of Asia's 'economic tigers', when crisis deepened early '98 and the country appealed for help from G-7, and began implementing financial reforms.

On June 9, 1996 King Bhumibol, currently world's longest reigning monarch, completed 50 years on the throne.

In 2000, the Chakri dynasty marked the 200th anniversary.

Economy: Agriculture is the mainstay of the country and engages 60 per cent of the population. The chief crop is rice and Thailand is world's biggest rice exporter - target for 1996 was 5m. tons. Coconuts, tobacco, cotton and teak are the other items of agri-

cultural exports. During the last decade Thailand increased her export of manufactured and processed items. **Industry:** Cement, processed food, textiles, wood, tin, jewelry. **Minerals** include tin (one of the largest producers), manganese, tungsten, antimony, lignite and lead. Since 1982 tourism has been Thailand's largest revenue earner.

Recent Events: In April-May 2006, snap election called by the Prime Minister amid mass rallies against him, was boycotted by the opposition and was subsequently annulled, leaving a political vacuum. The Prime Minister took a seven-week break from politics.

Mission in India: Royal Thai Embassy, 56-N, Nyaya Marg, Chanakyapuri, New Delhi - 110 021. Tel: 26118103; Fax: 26872029.

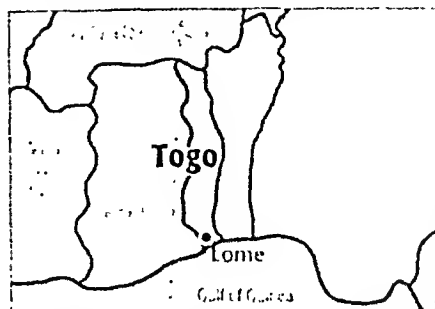
E-mail:thaidel@mfa.go.th

Indian Mission in Thailand: Embassy of India, 46, Soi 23 (Prasannmitr) Sukhumvit Road, Bangkok-10110, Thailand. Tel: 00-66-2-258-0300 to 6; Fax: 00-62-2-2584627, 2621740.

E-mail:indiaemb@mozart.inet.co.th

177. Togo

(Republic of Togo) Republique Togolaise



Capital: Lome. **Area:** 56,785 sq.km.; **Population:** 5,548,702, **Languages:** French (official) and tribal languages; **Religions:** indigenous beliefs-51%, Christian-29%, Muslim-19%; **Literacy:** 60.9%, **Life Expectancy**

rency: CFA Franc (\$1=518.98); p.c.i: \$ 1,700;
Date of Independence: 27th April, 1960.

Government Type: Republic; President: Faure Gnassingbe; PM: Edem Kodjo.

History: The Republic of Togo, formerly Togoland, lies on the west coast of Africa forming a narrow strip stretching from the Gulf of Guinea north to Burkina Faso. Gained independence on Apr. 27, 1960. The first multi-party elections were held in 1994. In '98, President Eyadema was re-elected.

Economy: The principal products are coffee, cocoa, cotton, palm kernels, kapok and groundnuts. Togo's considerable natural resources are still largely undeveloped. Phosphates, now being mined in increasing quantities, form the country's principal export. Industry: Textiles, shoes, handicrafts, agricultural processing.

The 36th summit of Organisation of African Unity was held in Lome in July, 2000.

Recent Events: In April 2006, reconciliation talks between government and opposition resumed. In August, government and opposition signed an accord providing for the participation of opposition parties in a transitional government.

Mission In India: Honorary Consulate of the Republic of Togo, T & T Motors Ltd., 212, Okhla Industrial Estate, Phase III, New Delhi-110 020; Tel: 26821005-06; Fax: 6821013.

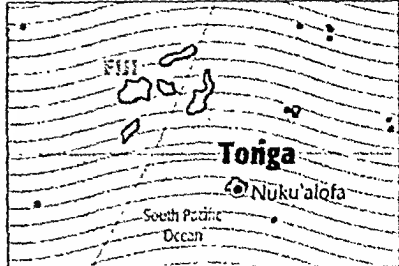
E-mail: ttntalwar@vsnl.net and tandt@ndf.vsnl.net.in

178. Tonga

(Kingdom of Tonga) Puleanga Fakaktui O Tonga

Capital: Nuku'alofa; Area: 748 sq.km.; Population: 114,689; Languages: English and Tongan; Religions: Christian; Literacy: 98.9%; Life Expectancy: 69.82; Currency: Pa'anga (\$1=2.0345); p.c.i: \$ 2,300; Date of Independence: 4th June, 1970.

Government Type: Constitutional Monar-



chy; Head of State: King Tau-fa'ahau Topou IV. PM: Feleti Sevele.

History: Tonga (also called Friendly Islands) consists of 169 islands and islets in the south western Pacific Ocean. The Tropic of Capricorn and the International Dateline cross each other very near Tonga.

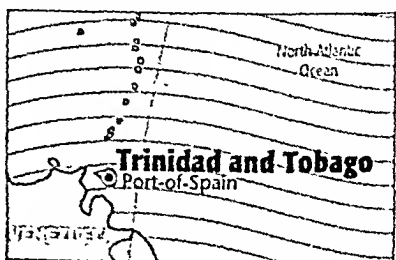
First visited by the Dutch in early 17th century, Tonga became a British protectorate in 1900 and independent on June 4, 1970. The island country was admitted to the United Nations in Sept. 1999.

Economy: Tonga is an agricultural country. Crops: coconuts, bananas, vanilla, coffee, ginger. Copra and bananas exported. Industry: Tourism, coconut products, fishing.

179. Trinidad and Tobago

(Republic of Trinidad and Tobago)

Capital: Port-of-Spain; Other Large Cities: San Fernando, Arima; Area: 5128 sq.km.; Population: 1,065,842; Languages: English; Religions: Roman Catholic-26%, Hindu-22.5%, Anglican-7.8%, Baptist-7.8%, Pentecostal-6.8%, other Christian-5.8%, Muslim-5.8%,



Seventh Day Adventist-4%, others-26.7%; Literacy: 98.6%; Life Expectancy: 66.76; Currency: Tri & Tob Dollar (\$1=6.29); p.c.i: \$ 16,700; Date of Independence: 31st August, 1962.

Government Type: Parliamentary Democracy; **President:** George Maxwell Richards; **PM:** Patrick Manning.

Trinidad and Tobago are the southernmost islands of the Caribbean archipelago.

History: Formerly a British Colony, it achieved independence in 1962 and became a republic in 1976.

Ethnic profile: African descent 40.8% , Indians 40.7%, mixed races 16.3%, European, Chinese and others 2.2%.

Economy: There are large reserves of petroleum and natural gas. Trinidad and Tobago has the most diversified and industrialised economy in the English-speaking Caribbean. Industries include oil processing, manufactured goods, fertilisers, rum, cement and tourism. Chief crops are sugarcane, citrus fruit, cocoa, coffee and bananas.

Mission in India: High Commission for the Republic of Trinidad and Tobago, 6/25, Shanti Niketan, New Delhi - 1100021. Tel: 26888427; Fax: 26888463.

E-mail: hcreptt@giadsd101.vsnl.net.in

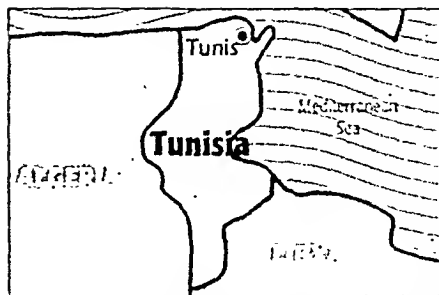
Indian Mission in Trinidad and Tobago: High Commission of India, No.6, Victoria Avenue, Post Box No. 530, Port of Spain, Trinidad and Tobago, West Indies. Tel: 00-1-868-6277480, 6277481; Fax: 00-94-1-868-6276985.

E-mail: hcipos@tstt.net.tt

180. Tunisia

(Republic of Tunisia) Al Jumhuriyah al Tunisiyah

Capital: Tunis; **Other Large Cities:** Sfax, Sousse; **Area:** 164,150 sq.km.; **Population:** 10,175,014; **Languages:** Arabic (official) and French; **Religions:** Muslim-98%, Christian-



1%, Jewish and others-1%; Literacy: 74.3%; Life Expectancy: 75.12; Currency: Dinar (\$1=1.33); p.c.i: \$ 8,300; Date of Independence: 20th March, 1956.

Government Type: Republic; **President:** Gen. Zine-al-Abidine Ben Ali. **PM:** Mohamed Ghannouchi.

History: A republic in North Africa, lying on the Mediterranean coast and formerly a French protectorate, Tunisia became autonomous in 1956 and assumed republican status in 1957. It is the site of ancient Carthage.

Economy: Tunisia is an agricultural country, and produces wheat, barley, oats, dates, olives, citrus fruits, almonds, figs, vegetables and alfa grass. The chief minerals are phosphates, iron, lead and zinc. **Industry:** Oil production, textiles, leather, fertilisers, construction materials, food processing. The principal exports are olive oil, wine, phosphates and grains.

Mission in India: Embassy of the Republic of Tunisia, A-42, Vasant Vihar, New Delhi - 110 057. Tel: 2614 5346, 2614 5349; Fax: 26145301.

E-mail: embtundelhi@dishnet.dsl.net

Indian Mission in Tunisia: Embassy of India, 4, Place Didon, Notre Dame, Tunis 1002. Tel: 00-216-1-787819; Fax: 00-216-1-783394 E-mail: embassy.india@gmail.com

181. Turkey

(Republic of Turkey)

Capital: Ankara; **Other Large**



Izmir, Adana, Bursa; Area: 779,452 sq.km.; Population: 70,413,958; Languages: Turkish, Kurdish, Arabic; Religions: Muslim-99.8% (mostly Sunni), other-0.2% (mostly Christians and Jews); Literacy: 86.5%; Life Expectancy: 72.62; Currency: Turkish Lira (\$1=1.596); p.c.i: \$ 8,200; Date of Independence: 29th October, 1923

Government Type: Republic; **President:** Ahmet Necdet Sezer, **PM:** Recep Tayyip Erdogan.

A republic in south eastern Europe and Asia Minor, Turkey occupies a strategic position, linking as it does Asia and Europe at the Straits of Bosphorus, between the Mediterranean and the Black Sea.

History: Asiatic Turkey, that is, Anatolia, was the seat of one of the earliest civilizations known. Istanbul, the largest city, was first known as Byzantium and then as Constantinople. The Ottoman Turks conquered Constantinople in 1453 and founded a Turkish Empire. In 1923, Turkey became a republic.

Religious and ethnic tensions and active left and right extremists have caused endemic violence.

Some 12 m Kurds live in Turkey. Kurdish militants demand an independent state for the Kurds. Kurdish Workers' Party (PKK) leader Abdullah Ocalan was arrested in Kenya in Feb. '99 and taken to Turkey. In Sept., PKK said it would lay down arms once and for all.

In July 1996, in a break with Turkey's 73-year record of zealous secularism, Turkish par-

liament gave approval to a coalition government led by the Islamic Party. In June '97, conservative Mesut Yilmaz took over as PM. In '98, the Islamist party was banned. Welfare party, the largest political party, was officially disbanded for being anti-secular.

A rail link completing the new "silk route" between China and Turkey through Central Asia started operation in May, '96.

In July, '97, Turkey announced plans to gradually integrate northern Cyprus into Turkey, to match any moves by the Greek-Cypriot part of the divided island to join EU. The Turkish Republic of Northern Cyprus is only recognised by Ankara. In Dec. '97, EU rejected Turkey's candidacy.

On Aug. 17, 1999 a devastating earthquake hit Turkey killing at least 12,000 people. 600,000 people were made homeless.

Economy: Agriculture maintains about 64 per cent of the population. The chief products are tobacco, wheat, cotton, olive oil and sugar. Turkey is the world's second largest producer of sultana raisins. Sheep and cattle abound in the plateau of Anatolia and provide mohair for which Turkey is famous. The main minerals are iron ore, copper, chromium, bauxite and coal. **Industry:** Iron, steel, machinery, petroleum, metal products, cars, processed foods.

Recent Events: In March 2006, 14 suspected Kurdish rebels were killed by Turkish security forces. In April, clashes involving Kurdish protesters and security forces resulted in at least a dozen deaths in Southeastern areas. Baku-Tbilisi-Ceyhan pipeline was formally opened at ceremony in Turkey after Caspian oil started flowing along it.

Mission in India: Embassy of the Republic of Turkey, N-50, Nyaya Marg, Chanakyapuri, New Delhi-110021. Tel:26889053. Fax: 26881409.

E-mail:temdelhi@mantraonline.com

Indian Mission in Turkey: Embassy of In-

dia, 77-A, Cinnan Caddesi, Cankaya, 06560
Ankara, Turkey. Tel: 00-90-312-4382193;
Fax: 00-90-312-4403429.

E-mail: chancery@indembassy.org.tr

182. Turkmenistan

(Republic of Turkmenistan) Turkmenistan
Respublikasy



Capital: Ashkhabad (Politotsk); Other Large
Cities: Chardzhou, Mary; Area: 488,100
sq.km.; Population: 5,042,920; Languages:
Turkmen, Russian; Religions: Muslim-89%,
Eastern Orthodox-9%, unknown-2%, Lit-
eracy: 98.8%; Life Expectancy: 61 1/2, Cur-
rency: Manat (\$1=6,200); p.c.c: \$ 2,000, Date
of Independence: 27th October, 1991

Government Type: Republic, President &
PM: Saparmurat Niyazov

A former Soviet republic, Turkmenistan is
bounded by the Caspian sea on the west. Its
neighbours are Uzbekistan, Iran and Afghanis-
tan. The Kura Kum desert occupies 25% of
the area.

History: The region formed part of Rus-
sian Turkestan in 1925 and a republic of the
USSR in 1925.

In Oct. 1991, "democratic" elements with
formation of independent state, with Turkmen as
member of the CIS in Dec.

Population growth rate 1990-95 is 1.4% per
cent. Communism being rejected.

Economy: Mainly agriculture and stock
raising, cotton being major export. In 1991,
total value of exports was \$ 1.5 billion.

Technology agriculture of poor standard. Most of
Turkmenistan is arid. Most of its exports
stuffs. Natural resources of various oil, coal,
sulphur, salt, magnesium. Turkmenistan and
gas reserves give Turkmenistan an edge over
other former Soviet republics. Industry: Food,
textile, chemical, cement, agricultural imple-
ments, ferrous metals, machine, building. The
country is self-sufficient in electricity.

Recent Events: In January 2000, President
Niyazov ordered substantial cuts in gas ex-
ports saying he wanted to "bring order" to
the system. In April, an agreement was signed
with Beijing on building pipeline to supply
Turkmen gas to China.

Mission in India: Embassy of Turkmenis-
tan, 6/16, Shanti Udyatan, New Delhi
110021; Tel: 26118102, Fax: 26118112
24674010

E-mail: turkmen@vsnl.net

Indian Mission in Turkmenistan: Embassy
of India, Empress's International House,
Center, 1, Lenin, 1, 140 211, P.O. Box No. 26
Ashkhabad, Turkmenistan. Tel: 66 01 331
456132, 456133, Fax: 66 01 331 456134
456135

E-mail: indian@vsnl.net

183. Tuvalu

Capital: Funafuti. The country is composed
of 12 islands, 7 of which are inhabited. The
population is about 10,000. The country is
a member of the Commonwealth of Nations
and the Pacific Community. It is a developing
country with a high unemployment rate.

The country is a member of the Pacific
Community and the Commonwealth of Nations.
It is a developing country with a high unem-
ployment rate. The country is a member of
the Pacific Community and the Commonwealth
of Nations. It is a developing country with a
high unemployment rate.

(Tuvaluan coins also upto A\$1) (\$1=A\$ 1.36); p.c.i: \$ 1,100; Date of Independence: 1st October, 1978.

Government Type: Parliamentary Democracy; **Gov. Gen.:** Filoimea Telito; **PM:** Maatia Toafa.

History: Formerly known as the Ellice Islands, Tuvalu is a scattered group of nine small atolls in the Western Pacific Ocean and one of the world's smallest independent nations. It separated from the British Gilbert and Ellice Islands colony in 1975 under the name Tuvalu. Full independence was granted on October 1, 1978.

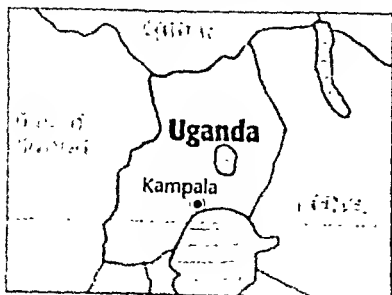
Economy: The poor quality of the soil permits subsistence farming of coconuts only. Most of the foreign exchange is earned through the sale of postage stamps and coins, copra and from remittances by Tuvaluans abroad.

Tuvalu was admitted to the UN as its 189th member in Sept., 2000.

184. Uganda

(Republic of Uganda)

Capital: Kampala; **Other Large Cities :** Jinja, Mbale, Masaka, Entebbe; **Area:** 241,139 sq.km.; **Population:** 28,195,754; **Languages:** English, Luganda and Swahili; **Religions:** Roman Catholic-33%, Protestant-33%, Muslim-16%, indigenous beliefs-18%; **Literacy:** 69.9%; **Life Expectancy:** 52.67; **Currency:** Uganda Shilling (\$1=1,857); p.c.i: \$ 1,800;



Date of Independence: 9th October, 1962.

Government Type: Republic; **President:** Yoweri Museveni. **PM:** Apollo Nsibambi.

History: Uganda is an equatorial state in East Africa. Formerly a British protectorate, Uganda became independent in 1962 and a republic in 1963. A military coup led by Lt. Gen. Tito Okello ousted Milton Obote's govt. in 1985. Milton Obote had himself come to power after ousting dictator Idi Amin in 1979. In 1972, nearly all of Uganda's 45,000 Asians were expelled.

Economy: The economy is agricultural. Main products are coffee (Africa's biggest producer) and cotton. **Industry:** Tea, sugar, tobacco, textiles, beer and cement. **Minerals:** Copper, cobalt. Uganda's economy has become the fastest growing in Africa.

Recent Events: In February 2006, President Museveni won multi-party elections, taking 59% of the vote against the 37% share of his rival, Kizza Besigye. In July, peace talks between the government and the LRA began in southern Sudan. On August 4, the LRA declared a unilateral ceasefire.

Mission In India: Uganda High Commission, B-3/26, Vasant Vihar, New Delhi-110 057; **Tel:** 26144413, 26145817; **Fax:** 26144405.

E-mail: ughcom@ndb.vsnl.net.in

Indian Mission in Uganda: High Commission of India, Plot 11, Kyandonda Road, Nakasero, P.O. Box 7040, Kampala, Uganda. **Tel:** 00-256-41-257368, **Fax:** 00-256-41-254943.

E-mail: hicomind@starcom.co.ug

185. The Ukraine

(Ukrayina)

Capital: Kiev; **Other Large Cities:** Kharkiv, Donetsk, Odessa, Lviv; **Area:** 603,700 sq.km.; **Population:** 46,710,816; **Languages:** Ukrainian, Russian; **Religions:** Ukrainian Orthodox, Moscow Patriarchate, Kiev Patriarch-



ate, Autocephalous Orthodox, Ukrainian Catholic (Uniate), Protestant, Jewish; Literacy: 99.7%; Life Expectancy: 69.98; Currency: Hryvnia (\$1=6.00); p.c.i: \$ 7,200; Date of Independence: 24th August, 1991.

Government Type: Republic; President: Viktor A. Yushchenko; PM: Tymoshenko.

History: The Ukraine in south-west former USSR became independent in 1991. It has a Black Sea coast and western frontiers with Romania, Hungary, Poland and Czechoslovakia and is bounded north by Byelorussia and otherwise by Russia. Ukraine was one of the founder members of the CIS.

It is the most densely populated of the former Soviet republics. The second richest former Soviet republic, Ukraine contains some of the richest land in former USSR. It is considered the Soviet wheat belt.

In Apr. '86, the world's worst nuclear power plant disaster occurred in Chernobyl, Ukraine. The plant has been closed for good.

In June, '95, Russia and Ukraine reached agreement on the disputed Black Sea fleet at Sevastopol. In June, 1996, Ukraine became a nuclear weapon-free nation with the transfer of the last of its warheads to Russia. A new constitution legalising private property and establishing Ukrainian as the sole official language was approved in the same month.

Economy: Wheat, sugarbeet, sunflower, cotton, flax, tobacco, soya, fruit and vegetables, meat and milk are the main agricultural products. Natural resources: Coal, iron

ore, manganese, oil, salt and chemicals. Industry: Ferrous metallurgical, chemical, machinery, paper, television, consumer goods and food industries.

Recent Events: In January 2006, Russia briefly cut supply of gas for Ukrainian use in row over prices. In March, Viktor Yanukovich's party topped polls in parliamentary elections. Yuliya Tymoshenko's took second place, leaving President Yushchenko's trailing in third. After months of bargaining, the backers of the Orange Revolution - the Yushchenko and Tymoshenko blocs and the socialists - agreed on a coalition, but the deal collapsed. The socialists agreed instead on a coalition with Viktor Yanukovich's party of Regions and the Communists. Faced with a deadline to accept Mr. Yanukovich's nomination or call new elections, president Yushchenko agreed that his rival can become prime minister.

Mission in India: Embassy of Ukraine, No.E-1/8, Vasant Vihar, New Delhi-110 057; Tel: 26146041, 26146042, Fax: 26146043

E-mail:Embassy@bol.net

Web: www.ukraineembassyindia.com

Indian Mission in Ukraine: Embassy of India, 4, Terokhina Street, Padol District, Kyiv-254080, Ukraine. Tel: 00-380-44-4356661; Fax: 00-380-44-4356619.

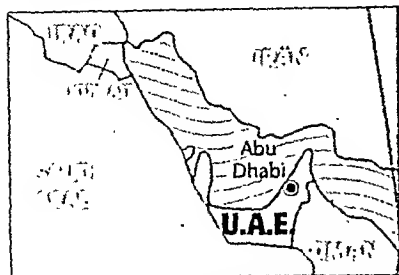
E-mail:india@public.ua.net

186. United Arab Emirates

Ittihad al-Imarat al-Arabiyyah

Capital: Abu Dhabi; Other Large Cities: Dubai, Sharjah, Ras al-Khamah; Area: 82,880 sq.km; Population: 2,602,713; Languages: Arabic; Religions: Muslim-96% (Shi'a-16%), Christian, Hindu and others-4%; Literacy: 77.9%; Life Expectancy: 75.44; Currency: Dirham (\$1=3.673); p.c.i: \$ 43,400; Date of Independence: 2nd December, 1971.

Government Type: Federation of Emirates



President: Sheikh Khalifa bin Zayid Al Nahayyan; **Vice President and PM:** Maktum bin Rashid al-Maktum.

History: The United Arab Emirates consist of seven autonomous emirates in the Persian Gulf—Abu Dhabi, Dubai, Sharjah, Umm-al-Qaiwain, Ajman, Fujairah and Ras-al-Khaimah. These were formerly referred to as the 'Trucial States'. Most of the land is barren and sandy. Rainfall is limited and erratic. One-tenth of the population are nomads.

Abu Dhabi, which is the capital of the Union, is the largest of the Emirates in area. Dubai is the main port of the Union and now has the largest harbour in West Asia. Dubai, the commercial hub of the Middle East, is now transforming itself into a manufacturing location and also a cultural, sports, leisure, and shopping centre.

Economy: In the past, the people of this area made their living from subsistence agriculture and fishing, though with little good land or supplies of fresh water the agricultural prospects are limited. A combination of land reclamation and irrigation from underground aquifers allows farmers to grow dates for export and enables the UAE to be self-sufficient in fruit and vegetables. As a result of such efforts, total production increased six-fold during the 1990s.

Both Abu Dhabi and Dubai have steadily been diversifying away from oil into such areas of refining and petro-chemicals. Dubai has the world's largest single-site aluminium smelter and has a major duty-free zone at

Jebel. Tourism is another useful source of income. Dubai's port, airport, and glittering array of hotels, restaurants and shops draw people from all over the region.

Only a tiny proportion of the land area is suitable for agriculture. Crops include dates and alfalfa, along with other fruit varieties and cereals. Besides oil and gas industries, aluminium smelting, trade and financial services are also important.

Recent Events: In January 2006, Sheikh Maktoum bin Rashid al-Maktoum, UAE prime minister and vice-president and ruler of Dubai, died during a visit to Australia. He was succeeded by his brother, Sheikh Mohammed bin Rashid al-Maktoum. In March, a political storm in the United States forced state-owned Dubai Ports World to relinquish control of terminals at six major US ports. Critics of the ports deal feared an increased risk of terrorist attack, saying the United Arab Emirates was the home of two of the 9/11 hijackers. The UAE announced several economic changes, including the days of the official weekend to improve Western business contacts, and to labour laws to reduce dependence on foreign workers and to allow labourers to form trade unions.

Mission in India: Embassy of the UAE, EP-12, Chandergupta Marg, Chanakyapuri, New Delhi-110 021. Tel: 24670830, 24670945; Telefax: 26873272.

E-mail: embassyemirates@bol.net.in/
embassyabudhabi@bol.net.in

Indian Mission in UAE: Embassy of India, Villa No. 9, Street No. 5, Sector-2/33, Khalidiya, P.O.Box No.4090, Abu Dhabi (UAE). Tel: 00-971-2-6664800; Fax: 00-971-2-6661518.

E-mail: indiauae@emirates.net.ae

187. United Kingdom

United Kingdom of Great Britain and Northern Ireland



Capital: London; **Other Large Cities:** Manchester, Birmingham, Glasgow, Leeds, Liverpool; **Area:** 244,108 sq km; **Population:** 60,609,153; **Languages:** English, Welsh, Scottish and Gaelic; **Religions:** Christian (Anglican, Roman Catholic, Presbyterian, Methodist)-71.6%, Muslim -2.7%, Hindu -1%, unspecified or none-23.1%, **Literacy:** 99%; **Life Expectancy:** 78.54 ; **Currency:** Pound Sterling (\$1=0.540); **p.c.i:** \$ 31,460 ; **Date of Independence:** 1284.

Government Type: Constitutional Monarchy; **Head of State :** Queen Elizabeth II, **PM:** Tony Blair.

History: The United Kingdom(UK) constitutes the greater part of the British Isles. Great Britain is the largest of the islands forming the United Kingdom. It comprises England, Scotland, and Wales. The next largest is Ireland, comprising Northern Ireland, which is part of the UK, and the Irish Republic. Western Scotland is fringed by the large island chains known the inner and Outer Hebrides, and to the north of the Scottish mainland are the Orkney and Shetland islands. All these, along with the Isle of Wight, Anglesey and the Isles of Scilly, have administrative ties with the Mainland, but the Isle of Man in the Irish Sea and the Channel Islands between Great Britain and France are largely self-governing, and are not part of the UK. The UK is one of the 25 member states of the European Union (UN).

The United Kingdom's system of govern-

ment is known as constitutional monarchy, though its constitution is not contained in any one document; instead it has evolved over many years. Ministers of the Crown govern in the name of the Sovereign, who is both head of state and head of the government. Actual power is vested in parliament which is the supreme legislative body in Great Britain. The parliament consists of two houses -the House of Lords and the House of Commons.

Economy: Britain is one of the world's leading industrial and exporting countries. Chief industries are iron and steel, engineering, chemicals, electronics, motor vehicles, metals, machinery, ship building, aircraft, textiles, cloth, other consumer goods and banking. Metals and metal using industries contribute more than 50% of the exports. Britain's coal mines yield about 128 million tons annually. Although Britain's agriculture and trawler fishing are highly mechanised, half of the country's food supplies and most of its raw materials are imported. Chief crops: Grains, sugar, fruits, vegetables.

Severn and Thames are the largest rivers. The most famous church is Westminster Abbey. The most celebrated universities are Oxford and Cambridge. There are about 40 other universities.

England: Population: 49m. A large overseas empire was established. United with Wales (1536), with Scotland (1707) and with Ireland (1801; partition in 1921) to form United Kingdom.

Wales: The principality of Wales in Western Britain has a population of 2,899,000. Cardiff is the capital. English and Welsh are spoken.

Scotland: Scotland occupies the northern 37% of the main British island, and the Hebrides, Orkney, Shetland, and smaller islands. Population: 5,111,000. Edinburgh is the capital.

Northern Ireland is situated in the no-

east of Ireland and forms part of the United Kingdom. It comprises six Ulster counties of Antrim, Down, Armagh, Fermanagh, Londonderry and Tyrone. The rest of the island forms the Republic of Ireland. Northern Ireland has been rocked by bloody agitation for union with Catholic Irish Republic. 1985 saw an Anglo-Irish agreement which for the first time gave Dublin a say in the running of the province. Population: 1,610,000 and Capital: Belfast.

Agriculture is the main occupation in Northern Ireland. Cattle, sheep, hogs, eggs, poultry, potatoes and milk are the important products. Linen, ropes, twines, rayon, clothing, tobacco, aircraft and shipping form the main branches of industry.

Recent Events: Tony Blair suffered his first House of Commons defeat as Prime Minister when MPs voted against increasing from 14 to 90 days the length of time terror suspects can be held without charge. Instead, they backed increasing it to 28 days. Police in London said they had foiled a terrorist plot on an "unimaginable scale" to blow up a number of aeroplanes flying between Britain and the United States.

Mission In India: High Commission for Britain, Shantipath, Chanakyapuri, New Delhi-110021. Tel: 0091-11-24192100, 26872161; Fax: 0091-11-26870060 (Visa).

E-mail: postmasterNewDelhi@lco.gov.uk; Web: www.ukinindia.com

Consulate: Kolkata: British Deputy High Commission, 1A Ho. Chi Minh Sarani, Kolkata-700 071, Tel: (91-33) 22885172/22885173-76, E-mail: kolkata@fco.gov.uk

Chennai: British Deputy High Commission, 20, Anderson Road, Chennai-600 006, Tel: (91-44) 52192151

Indian Mission In United Kingdom: High Commission of India, India House, Aldwych, London WC2B 4NA, United Kingdom. Tel: 00-44-0207-8368484, 3796242 (After Office); Fax: 00-44-0207-8364331.

E-mail: 114343.3045@compuserve.com

Britain's Dependent Territories

Anguilla, Bermuda, British Antarctic Territory, British Virgin Islands, Cayman Islands, Falkland Islands, Gibraltar, Montserrat, Pitcairn, Ducie, Henderson and Oeno, St. Helena and St. Helena Dependencies (Ascension and Tristan da Cunha), South Georgia and the South Sandwich Islands and Turks and Caicos Islands.

Isle of Man and the Channel Islands are direct dependencies of the Crown with their own legislative and taxation systems.

Isle of Man: It is in the Irish sea. Area: 572 sq.km. Population: 73,112. Capital: Douglas.

The Channel Islands: Off the North-West coast of France are Jersey, Guernsey and the dependencies of Guernsey. Area: 194 sq.km. Population: 152,241.

Anguilla: Formerly Part of St. Kitts-Nevis-Anguilla, it became de facto a separate dependency of Britain in 1969; new constitution in 1982. Area: 155 sq.km. Population: 11,797; Capital: The Valley.

Bermuda: Bermuda is a group of some 300 small coral islands in the Western North-Atlantic. In a referendum in Aug. '95, Bermudans rejected independence. Area: 53.3 sq.km; Population: 63,022; Capital: Hamilton. PM: Pamela Gordon. Population is 60% black. Persons of British or Portuguese stock form the rest.

The chief crops are vegetables, flowers, (Easter lilies specially), bananas and citrus fruits. Tourism is the main source of revenue.

Montserrat: Capital: Plymouth; Area: 102 sq.km; Population: 12,000; Languages: English and Patois; Literacy: 53%; Religions: Christianity; Currency: Eastern Caribbean Dollar; \$1 = \$2.69; p.c.i.: \$3127 (1985) Gov: F.J. Savage; Chief Minister: Reuben Meade.

From 1871 to 1956, it formed part of the

federal colony of the Leeward Islands. The island, a British Associate State with full internal autonomy, adopted a constitution in 1960.

188. United States of America

United States of America

Capital: Washington D.C.; Other Large Cities: New York, Los Angeles, Chicago, Houston, Philadelphia, San Diego, Detroit, Dallas, Boston, Miami, Atlanta, Pittsburg, San Francisco; Area: 9,372,614 sq.km.; Population: 298,444,215; Languages: English; Religions: Protestant-52%, Roman Catholic-24%, Mormon-2%, Jewish-1%, Muslim-1%, other-10%, none-10%; Literacy: 97%; Life Expectancy: 77.85; Currency: Dollar (\$1-1.00); p.c.l: \$ 41,800; Date of Independence: 4th July, 1776.

Government Type: Federal Republic; President: George W. Bush.

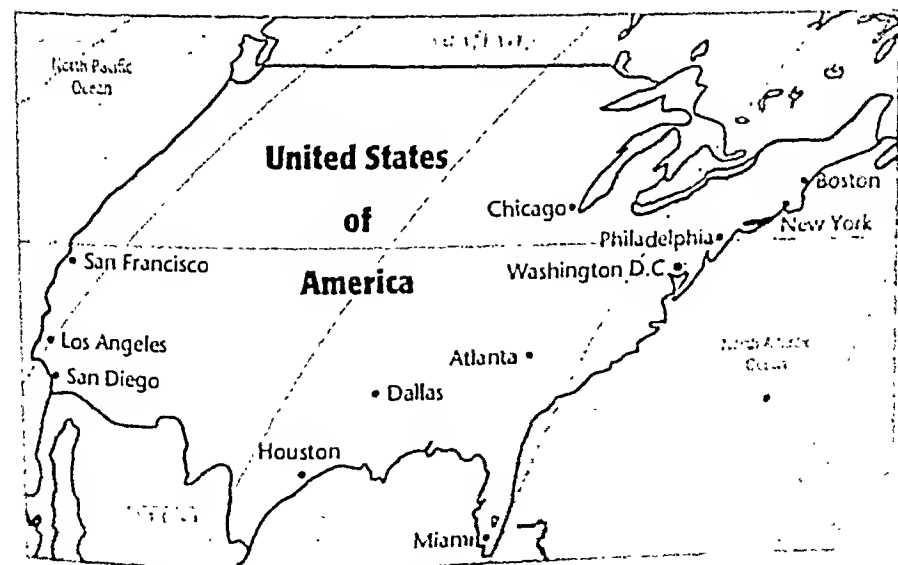
History: The United States of America is a federal republic composed of a federal district (Washington, D.C.) and 50 states, of

which all except one - Hawaii islands - are in mainland America.

The United States of America, which covers the central part of North America, grew out of the British colonies that were established in North America in the first half of the 17th century. The Declaration of Independence of the 13 states of which the American Union then consisted was adopted by Congress on July 4, 1776.

The victory of the Allies in WW-I made USA a world power. The end of the WW-II saw the emergence of USA as one of the superpowers. With the break-up of USSR in 1991, it has now become the only superpower.

The Union originally comprised 13 states, to which 7 were added subsequently. Thirty other states, which were formerly territories, were also admitted into the Union as full states, thus making up 50 states in all, apart from the District of Columbia. The following table gives the existing states of the Union with their postal abbreviations, capitals, area and population.



States of the Union

| Name | Capital | Area
(sq km) | Population
(1999) |
|---------------------------|-----------------|-----------------|----------------------|
| Alabama (AL)* | Montgomery | 133916 | 4,369,862 |
| Alaska (AK) | Juneau | 1530700 | 619,500 |
| Arizona (AZ) | Phoenix | 295260 | 4,778,332 |
| Arkansas (AR) | Little Rock | 137754 | 2,551,373 |
| California (CA) | Sacramento | 411049 | 33,145,121 |
| Colorado (CO) | Denver | 269596 | 4,056,133 |
| Connecticut (CT) | Hartford | 12997 | 3,282,031 |
| Delaware (DE) | Dover | 5294 | 753,538 |
| District of Columbia (DC) | Washington D.C. | 179 | 519,000 |
| Florida (FL) | Tallahassee | 151940 | 15,111,244 |
| Georgia (GA) | Atlanta | 152577 | 7,788,240 |
| Hawaii (HI) | Honolulu | 16760 | 1,185,497 |
| Idaho (ID) | Boise | 216431 | 1,251,700 |
| Illinois (IL) | Springfield | 145934 | 12,128,370 |
| Indiana (IN) | Indianapolis | 93719 | 5,942,901 |
| Iowa (IA) | Des Moines | 145752 | 2,869,413 |
| Kansas (KS) | Topeka | 213097 | 2,654,052 |
| Kentucky (KY) | Frankfort | 104659 | 3,960,825 |
| Louisiana (LA) | Baton Rouge | 123678 | 4,372,035 |
| Maine (ME) | Augusta | 86156 | 1,253,040 |
| Maryland (MD) | Annapolis | 27091 | 5,171,634 |
| Massachusetts (MA) | Boston | 21456 | 6,175,169 |
| Michigan (MI) | Lansing | 151585 | 9,863,775 |
| Minnesota (MN) | St. Paul | 218601 | 4,775,508 |
| Mississippi (MS) | Jackson | 123515 | 2,768,619 |
| Missouri (MO) | Jefferson city | 180515 | 5,468,338 |
| Montana (MT) | Helena | 380849 | 882,779 |
| Nebraska (NE) | Lincoln | 200349 | 1,666,028 |
| Nevada (NV) | Carson City | 286353 | 1,809,253 |
| New Hampshire (NH) | Concord | 24033 | 1,201,134 |
| New Jersey (NJ) | Treton | 20168 | 8,143,412 |
| New Mexico (NM) | Santa Fe | 314923 | 1,739,844 |
| New York (NY) | Albany | 127190 | 18,196,601 |
| North Carolina (NC) | Raleigh | 136413 | 7,650,789 |
| North Dakota (ND) | Bismarck | 183118 | 633,666 |
| Ohio (OH) | Columbus | 107045 | 11,256,654 |
| Oklahoma (OK) | Oklahoma City | 181186 | 3,358,044 |

| | | | |
|---------------------|----------------|--------|------------|
| Oregon (OR) | Salem | 251419 | 3,316,154 |
| Pennsylvania (PA) | Harrisburg | 117348 | 11,994,016 |
| Rhode Island (RI) | Providence | 3139 | 990,819 |
| South Carolina (SC) | Columbia | 80583 | 3,885,736 |
| South Dakota (SD) | Pierre | 199730 | 733,133 |
| Tennessee (TN) | Nashville | 109153 | 5,483,535 |
| Texas (TX) | Austin | 691030 | 20,044,141 |
| Utah (UT) | Salt Lake City | 219888 | 2,129,836 |
| Vermont (VT) | Montpelier | 24900 | 593,740 |
| Virginia (VA) | Richmond | 105587 | 6,872,912 |
| Washington (WA) | Olympia | 176480 | 5,756,361 |
| West Virginia (WV) | Charleston | 62758 | 1,806,928 |
| Wisconsin (WI) | Madison | 145436 | 5,250,446 |
| Wyoming (WY) | Cheyenne | 253325 | 479,602 |

*Postal two-letter (both capitals) abbreviations for U.S. states were introduced with the ZIP Code in 1963. These are fast replacing the older abbreviations.

Economy: Agriculture: Main crops are maize, wheat, soyabeans, barley, oats, rice, sugar, potatoes, cotton, tobacco and dairy products. Industries: Iron and steel, food and kindred products, chemicals, metal products, electronic equipment, machinery, transportation equipment, paper, petroleum products, fertilisers, plastics. Minerals: Coal, copper, lead, phosphates, uranium, zinc, gold, silver, iron, molybdenum, oil. Oil reserves in USA, the worlds second-biggest oil producer, are expected to last only 10 years if output continues at the current rate. Exports: Machinery, chemicals, motor vehicles, aircraft, military equipment, grains, cereals.

The U.S. is the only industrial country where large population increases are still projected, largely as the result of immigration. The US population used to be called a melting pot; now it is thought of as a 'salad bowl' with discrete ingredients. Even so there is extensive inter-marriage. One-quarter of Hispanics who wed in the USA marry non-Hispanics. One third of Asian-Americans marry non-Asians. Black and white are less likely to intermarry.

Recent Events: In March 2006, Congress renewed the USA Patriot Act, a centrepiece of the government's fight against terrorism, after months of debate about its impact on civil liberties. The government agreed to some curbs on information gathering. Millions of immigrants and their supporters took to the streets to protest against plans to criminalise illegal immigrants. The only man to be charged over September 11 attacks, self-confessed al-Qaeda conspirator Zacarias Moussaoui, was sentenced to life in jail.

Mission In India: Embassy of the USA, American Embassy, Chanakyapuri, New Delhi- 110021. Tel: 24198000; Fax: 24190017; Foreign Commercial Service and Library of Congress- 24, Kasturba Gandhi Marg, New Delhi-110 001; Tel:23316841.

E-mail: NDBoxMEA@STATE.GOV

Consulate: Calcutta: 5/1, Ho Chi Minh Sarani, Calcutta-700 071, West Bengal, Tel: 91 33 2282-3611/15 Email: Consular Calcutta@state.gov; Mumbai: Lincoln House, 78, Bhulabhai Desai Road, Mumbai-400 026, Tel: (22) 2363-3611 Email: webmaster-mumbai@state.gov; Chennai: Gemini circle, 220, Anna Salai, Chennai-600 006, Tel: 2811-2000 Email: chennaiIV@state.gov

Indian Mission in United States of America: Embassy of India, 2107, Massachusetts Ave, NW, Washington DC 2008. Tel: 00-1-202-9397000; Fax: 00-1-202-2654351.

E-mail: indembwash@indiagov.org

Outlying Territories

Puerto Rico: (Commonwealth of Puerto Rico); Capital: San Juan; Area: 8891 sq.km; Population: 4 m.; Languages: Spanish and English; Religions: Christianity; Currency: Dollar; p.c.i: \$6,360

Governor: Dr.Pedro Rossello.

The island of Puerto Rico lies 80 km east of Hispaniola (Haiti and Dominican Republics) in the outer Caribbean. In 1952, it ceased to be a colonial possession and became a free

Commonwealth. It has close ties with U.S. People have U.S. citizenship with no voting rights.

From a purely agricultural country, Puerto Rico (formerly Porto Rico) is fast changing to an industrial economy and is the wealthiest Caribbean island. "The Poor house of the Caribbean" was changed to an area with one of the highest standards of living in Latin America, thanks to the famous "Operation Bootstrap" begun in the late 40s.

In a referendum in November, 1993, Puerto Ricans said no to total merger with USA.

The main crops are sugar, tobacco and coffee. Industries include textiles, clothing, cigars, alcohol, chemicals and household appliances. Tourism is an important source of revenue.

Guam: Area: 541 sq.km.; Population: 149,620; Capital: Agana.

Commonwealth of the N.Mariana Is: Area: 477 sq.km.; Population: 45,200; Capital: Saipan.

American Samoa: Area: 199 sq.km. Population: 55,223; Capital: Pago Pago.

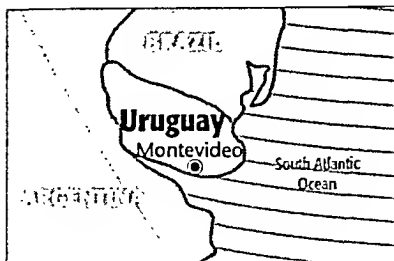
Other Pacific territories: Johnston Atoll (Two small islands 1150 km. southwest of Hawaii. Population: 1200; Midway Islands (Two small islands at the western end of the Hawaiian chain. Population: 453 (1980), Wake Island (Three small islands 3700 k.m. west of Hawaii. Population: 302(1980).

Virgin Islands of the United States: Area:342 sq.km. Population: 101,809; Capital: Charlotta Amalie.

189. Uruguay

(Oriental Republic of Uruguay) Republica Oriental del Uruguay.

Capital: Montevideo, Other Large Cities: Salto, Rivera, Area: 176,215 sq.km. Population: 3,431,932. Languages: Spanish. Religions: Roman Catholic.



Jewish-1%, non-Professing or others-31%; Literacy: 98% ; Life Expectancy: 76.33; Currency: Peso (\$1=23.8); p.c.i: \$ 9,600; Date of Independence: 25th August, 1825

Government Type: Republic; **Head of State & Govt (President):** Tabare Vazquez.

The smallest republic in South America, Uruguay lies in southern S. America, on the Atlantic Ocean.

History: Formerly a part of the Spanish Viceroyalty of Rio de la Plata and subsequently a province of Brazil, Uruguay became independent on Aug. 25, 1825. After a military coup of 1976, civilian government was restored in 1985.

Economy: Livestock-raising is Uruguay's principal occupation and takes up 60 per cent of its total land area. The chief products are meat, wool, hides, corn, wheat, citrus fruit, rice, tobacco, oats and linseed. Important industries are vinery, meatpacking, textiles, cement and oil products.

Socialist measures were adopted as far back as 1911. The welfare programmes earned Uruguay a reputation as the Switzerland of Latin America.

Mission In India: Embassy of Uruguay, A-16/2, Vasant Vihar, New Delhi-110 057, Tel: 26151991, 26151992; Fax: 2614 4306.

E-mail: uruind@del3.vsnl.net.in

190. Uzbekistan

Ozbekiston Respublikasy

Capitol: Tashkent; Other Large Cities:

Samarkhand, Namangan; Area: 447,400 sq.km.; Population: 27,307,134; Languages: Uzbek, Russian; Religions: Muslim-88% (mostly Sunnis), Eastern Orthodox-9%, others-3%; Literacy: 99.3%; Life Expectancy: 64.58; Currency: Som (\$1=1222.8), p.c.i: \$ 1,800; Date of Independence: 1st September, 1991.

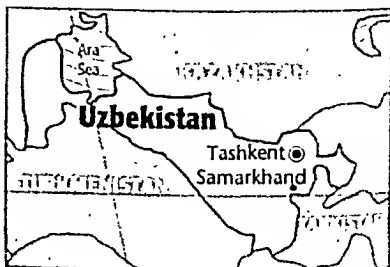
Government Type: Republic; **President:** Islam A. Karimov; **PM:** Shavkat Mirziyayev.

History: A former Soviet republic that became independent in Dec., 1991, Uzbekistan is bordered by Kazakhstan, Kyrgyzstan, Tajikistan, Afghanistan and Turkmenistan.

Economy: Agriculture: Uzbekistan has an excellent record in agriculture. Intensive farming, based on artificial irrigation is practised. It is the chief cotton-growing area in former Soviet Union and the third in the world. It produced 65% of the total cotton, 50% of the total rice and 60% of the total lucerne grown in the former union. Crops: cotton, lucerne, grain, potatoes, vegetables, grapes, fruit and berries. Natural resources: Oil, coal, copper, ozocerite, building materials. Industry: Agricultural machinery, cement, textiles, paper, ferroconcrete.

The Roman alphabet (in use 1929-40) was re-introduced in 1994.

Recent Events: In March 2006, Sanjar Umarov, head of the Sunshine Uzbekistan opposition movement, was jailed for 11 years - later reduced to eight- for economic crimes. The group had criticised the Andijan crack-down and had urged economic reform.



ts activist Mukhtabar Tojibayeva, a critic
the Andijan crackdown, was jailed for eight
rs for economic crimes.

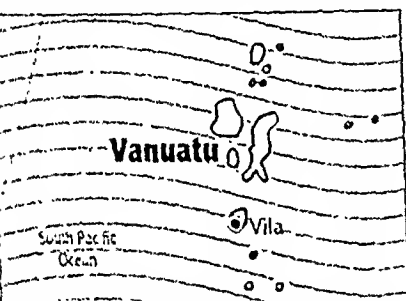
Mission in India: Embassy of the Republic
Uzbekistan, EP-40, Radhakrishnan Marg,
anakyapuri, New Delhi-110021, Tel:
670774, 24670775, 24105640; Fax:
670773. E-mail: uzembind@vsnl.com

Indian Mission in Uzbekistan: Embassy of
dia, S Ulitsa Alexie Tolstogo No.3, Tash-
nt, Uzbekistan. Tel: 00-998-71-1338357;
x: 00-998-71-13619756.

E-mail: indemb@online.ru

91. Vanuatu

(Republic of Vanuatu) Ripablik Blong Vanuatu



Capital: Vila; **Area:** 14,760 sq km; **Population:** 208,869; **Languages:** English, French and Bislama; **Religions:** Presbyterian-36.7%, Anglican-15%, Roman Catholic-15%, indigenous beliefs-7.6%, Seventh-Day Adventist-6.2%, Church of Christ-3.8%, others-15.7%; **Literacy:** 74%; **Life Expectancy:** 62.85; **Currency:** Vatu (\$1=113.45); **p.c.i.:** \$ 2,900; **Date of Independence:** 30th July, 1980.

Government Type: Parliamentary Republic; **President:** Kalkot Matas Kelekele; **PM:** Ham Lini.

History: The Anglo-French condominium of the New Hebrides became independent under the name Vanuatu on July 30, 1980. It is a double chain of 13 large and 80 small islands in South West Pacific. The largest island is the Espiritu Santo. Originally a haunt

of European pirates, they came under the control of France and Britain in 1906. The population is overwhelmingly Melanesian.

Economy: The major cash crops are copra, coffee and cocoa. Vanuatu is a popular tourist destination in the South Pacific.

Industry: Fish-freezing, meat canneries, tourism. Manganese has been mined since 1961 and exported to Japan.

192. Vatican City

(The Holy See) Sato della Cittadel Vaticano



Capital: Vatican City; **Area:** 0.4 sq. km.; **Population:** 900; **Languages:** Latin and Italian; (All languages accepted); **Religions:** Roman Catholic; **Literacy:** 100%; **Currency:** Euro (\$1=0.79); **Date of Independence:** 11th February, 1929.

Government Type: Ecclesiastical; **Supreme Pontiff:** Pope Benedict XVI (Cardinal Joseph Ratzinger). **Secretary of State:** Angelo Sodano.

The Vatican city state, sovereign and independent, is situated on the Vatican hill, on the right bank of the Tiber, within the commune of Rome, Italy. It is completely surrounded by Italy. Vatican City, the City of the Pope, includes St. Peter's Cathedral, Vatican Palace and Museum, the Vatican Gardens and neighbouring buildings. Vatican has its own railway station (for freight only), postal system, police, coins and radio. Radio Vaticana broadcasts an extensive service in 34 languages.

The city state is governed by a commission appointed by the Pope, who has full legal, executive and judicial powers. The reason for its existence is to provide an extra-territorial, independent base for the Holy See, the government of the Roman Catholic Church. In Dec. '93, the Vatican and Israel agreed to establish formal relations. In March, 1997 Vatican established diplomatic ties with Libya.

193. Venezuela

(Republic of Venezuela) Republica de Venezuela



Capital: Caracas; **Other Large Cities:** Maracaibo, Valencia; **Area:** 912,050 sq. km.; **Population:** 25,730,435; **Languages:** Spanish; **Religions:** Nominally Roman Catholic-96%, Protestant-2%, others-2%; **Literacy:** 93.4%; **Life Expectancy:** 74.54; **Currency:** Bolivar, (\$1=2,559.14); **p.c.i.:** \$ 6,100 ; **Date of Independence:** 5th July, 1811.

Government Type: Federal Republic; **Head of State & Govt. (President):** Hugo Chavez.

History: Venezuela (Little Venice) on the Caribbean coast is the northernmost state of South America. Sighted by Columbus in 1498, it was formerly a Spanish colony. Venezuela became independent in 1811 and a republic in 1830. Military strongmen ruled Venezuela for most of the 20th century. Since 1959, it has had democratically elected governments. Venezuela is the richest and most urbanised Latin American nation. The world's

highest waterfall, Angel Falls, with an overall drop of 979 m. is in Venezuela.

Economy: Venezuela, a member of the OPEC, is one of the world's leading producers of oil and the largest oil exporter outside the Middle East. Venezuela is rich in diamonds and ranks 8th in world production. Other minerals are iron, steel, aluminium, copper, tin and manganese. Agricultural products include coffee, cocoa, bananas, maize, rice and sugar.

President Chavez won a landslide victory for a six-year term, in August, 2000 capturing 59% of the votes.

Recent Events: Parties loyal to president Chavez made big gains in parliamentary elections. Opposition parties boycotted the poll, leaving parliament entirely made up of supporters of the president

Mission in India: Embassy of Venezuela, N-114, Panchshila Park, New Delhi-110 017. Tel: 26496535, 26496783; Fax: 26491686.

E-mail: embavene@del2.vsnl.net.in

Indian Mission in Venezuela: Embassy of India, Quinta Tagore, No.12, Avenida San Carlos, La Floresta, Apartado de Correo 61585, Chacao 1060, Caracas, Venezuela. Tel: 00-58-212-2857887; Fax: 00-58-2865131.

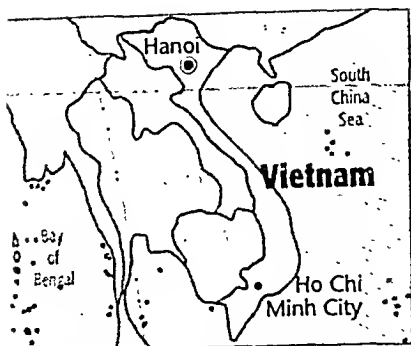
E-mail: embindia@eldishcom.ve

Website: <http://www.embindia.org>

194. Vietnam

(Socialist Republic of Vietnam) Cong Hoa Xa Hoi Chu Nghia Viet Nam

Capital: Hanoi; **Other Large Cities:** Ho Chi Minh City, Haiphong, Hue; **Area:** 329,566 sq. km; **Population:** 84,402,966; **Languages:** Vietnamese, French, English, Chinese; **Religions:** Buddhist, Hoa Hao, Cao Dai, Christian (predominantly Roman Catholic, Some Protestant), indigenous beliefs, Muslim; **Literacy:** 90.3%; **Life Expectancy:** 70.85; **Currency:** Dong (\$1=16983); **p.c.i.:** \$ 2,800 ; **Date of Independence:** 2nd September, 1945.



Government Type: Communist State;
President: Nguyen Minh Triet; **PM:** Nguyen Tan Dung

History: The Socialist Republic of Vietnam (comprising former North and South Vietnam) is a mountainous country in south east Asia. Running almost its entire length, is a mountain chain—the Annamite Chain. On one side of the mountain chain is the fertile Red River delta in the north and on the other side is the Mekong delta in the south. The two deltas form the rice bowl of the country.

Vietnam War was fought mainly in South Vietnam from 1954 between US backed government forces and Viet Cong. guerrillas supported by North Vietnam and Soviet armaments. US support of south began in 1961 and intensified from 1964. War formally concluded in 1973 but guerrilla activities continued in South. South Vietnam fell to communist forces in 1975 and gradual political reintegration followed. The unification of North and South Vietnam into the socialist Republic of Vietnam took place formally on July 2, 1976. The Northern capital, flag, anthem, emblem and currency were applied to the new state.

Economy: The country is primarily agricultural. Rice is the dominant crop and an export item. Other crops are rubber, sugarcane, coffee, maize and tea. Minerals include coal, tin, copper, chromium and phosphate. Industry: Cement, metallurgy, chemicals, paper, food processing and textiles.

After 3 million died defending their country, women outnumber men three to one in Vietnam.

Recent Events: Senior officials were investigated over the alleged embezzlement of millions of dollars of state money in the transport ministry. As part of an anticipated political shake-up, the prime minister, president and National Assembly chairman were replaced by younger leaders.

Mission in India: Embassy of the Socialist Republic of Vietnam, 17, Kautilya Marg, Chanakyapuri, New Delhi-110021. Tel: 23018059 (Visa Section), 23019818 (Ambassador's Office); Fax: 91-11-23017714.

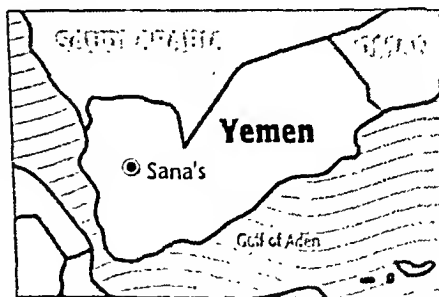
E-mail: sqdelhi@del3.vsnl.net.in

Indian Mission in Vietnam: Embassy of India, 58-60, Tran Hung Dao, Hanoi, Vietnam. Tel: 00-84-4-8244989; Fax: 00-84-4-8244998.

E-mail: india@netnam.org.vn

195. Yemen

(Republic of Yemen) Al Jumhuriyah al Yamaniyah



Capital: Sana'a; **Commercial (and winter) Capital:** Aden; **Area:** 531,000 sq km; **Population:** 21,456,188; **Languages:** Arabic; **Religions:** Muslim including Shaf'i (Sunni) and Zaiydi (Shi'a), small numbers of Jew, Christian, and Hindu; **Literacy:** 50.2%; **Life Expectancy:** 62.12; **Currency:** Rial (\$1=196.86); **p.c.i.:** \$ 900; **Date of Independence:** 22nd May, 1990.

Government Type: Republic; **President:**

Col. Ali Abdullah Saleh PM: Abd al-Qadir Ba Jamal.

History: North and South Yemen merged in May 1990 into a United Republic of Yemen in the south west of the Arabian peninsula. North Yemen was established in 1962 while South Yemen (formerly Aden and the Protectorate of South Arabia) became independent in 1967.

Centuries ago Yemen was a rich land of exotic spices, frankincense and myrrh. The legendary Queen of Sheba ruled the kingdom then known as Happy Yemen. South Yemen became the Arab world's only Marxist nation after independence.

In 1994, regional clan-based rivalries led to full-scale civil war. On May 5, S.Yemen declared itself an independent state, breaking away from united Yemen. The 2-month war ended on July 7, when Aden, fell to the northern forces. Losses caused by the conflict is estimated at \$3 b.

Parliamentary elections were held in Apr. 1997.

Economy: The economy is chiefly based on oil and agriculture. The main agricultural products are coffee, dates, herbs, fruits, wheat, millet and maize. Cotton, coffee, hides and skins are exported. Industries: Food processing, mining and petroleum refining.

Recent Events: In March 2006, more than 600 followers of slain Shia cleric Hussein al-Houthi who were captured following a rebellion he led in 2004 were released under an amnesty.

Mission In India: Embassy of the Republic of Yemen, J-16, Hauz Khas, New Delhi-110 016, Tel: 26602482 (Ambassador's Office); Fax: 26602483

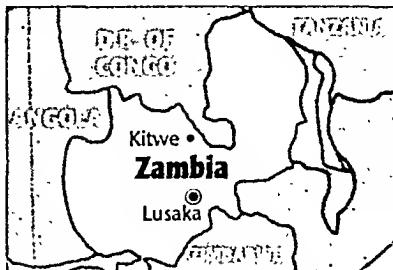
E-mail: yemenembnd@yahoo.com

Indian Mission In Yemen: Embassy of India, Building No. 12, Djibouti Street, Post Box No. 1154, Sana'a, Yemen. Tel: 00-967-1-508084, 508085; Fax: 00-967-1-508105

E-mail: indiaemb@y.net.ye

196. Zambia

(Republic of Zambia)



Capital: Lusaka; **Other Large Cities:** Kitwe, Chingola; **Area:** 752,620 sq km; **Population:** 11,502,010; **Languages:** Bantu and English; **Religions:** Christian-50-75%, Muslim and Hindu-24-49%, indigenous beliefs-1%; **Literacy:** 80.6%; **Life Expectancy:** 40.03; **Currency:** Kwacha (\$1=3,436); **p.c.i.:** \$ 890; **Date of Independence:** 24th October, 1964.

Government Type: Republic; **President:** Levy Patrick Mwanawasa; **PM:**

Zambia, a landlocked republic in south central Africa, takes its name from the River Zambezi, one of its biggest rivers. Originally known as Northern Rhodesia, it is separated from Zimbabwe by the Zambezi river. Kariba Dam, one of the biggest man-made dams in the world, is on the Zambezi river where it makes the border between Zambia and Zimbabwe.

History: Zambia, under the administration of the South Africa Company from 1889 to 1924, became independent republic within the Commonwealth republic on October 24, 1964. In the 1980s, decline in copper prices hurt the economy. June 1990 witnessed severe violence caused by food riots. One-party rule came to an end with October 1991 elections.

Economy: Maize, tobacco, millet, cassava, groundnuts, cotton and sugar are produced. The country is rich in minerals including copper, zinc, cobalt, lead, uranium and manganese. Although copper mining dominates Zambia's economy, the country made a ma-

por shift to agricultural production, as a result of the crippling fluctuations of copper prices in the world market. President Chiluba reversed 27 years of command-economy socialism under Kaunda.

Over 500,000 children had been orphaned by the AIDS epidemic by the late 1990s.

Recent Events: In April 2006, president Mwanawasa suffered a minor stroke. He resumed "light duties" after some weeks and later declared himself fit to run for re-election towards the end of the year.

Mission In India: High Commission of the Republic of Zambia, C-79, Anand Niketan, New Delhi-110 021. Tel: 24101289, 24101292; Fax: 24101520.

E-mail:zambiand@sify.com

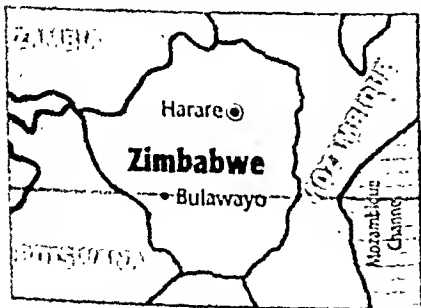
Indian Mission in Zambia: High Commission of India, 1, Pandit Nehru Road, P.O. Box 32111, Lusaka, Zambia. Tel: 00-260-1-253159, 253066; Fax: 00-260-1-254118.

E-mail:consular@india.zm

197. Zimbabwe

(Republic of Zimbabwe)

Capital: Harare; **Other Large Cities:** Bulawayo, Gweru; **Area:** 390,272 sq km; **Population:**



12,236,805; **Languages:** English, Shona and Ndebele; **Religions:** Syncretic (partly Christian, partly indigenous beliefs)-50%, Christian-25%, indigenous beliefs-24%, Muslim and others-1%; **Literacy:** 90.7%; **Life Expectancy:** 39.29; **Currency:** Dollar (ZWD)

(\$1=101196); p.c.i: \$ 2,300; **Date of Independence:** 18th April, 1980

Government Type: Parliamentary Democracy; **Head of State & Govt (President):** Robert G.Mugabe.

History: A landlocked country in SC Africa, Zimbabwe (formerly Southern Rhodesia) has Zambia, Botswana, S. Africa and Mozambique as neighbours. Achieved independence on April 18, 1980, after a bitter struggle against the white minority government in power.

Economy: Zimbabwe is rich in minerals notably copper, nickel, gold, asbestos, chrome and coal. Its platinum deposits are the world's largest. Over 40 different types of metals and minerals are produced. About 40% of foreign exchange is derived from the export of metals, minerals and mineral related products. Industries include food processing, metals, textiles, furniture and engineering. Maize, groundnuts, cotton and tobacco are the chief crops, tobacco being the most important one. Zimbabwe is world's second largest exporter of flue-cured tobacco, after Brazil. Zimbabwe's agricultural performance has been hailed as the best in black Africa. Tourism is the fastest growing sector in the country. About one-fourth of the adult population has HIV/AIDS.

A referendum rejected the new draft constitution in early 2000. In April, the constitution was amended to give the Govt. the right to seize white-owned farms without compensation. Mugabe, armed with the new law, went ahead with his plans to confiscate 804 farms belonging to Whites, to be redistributed to ordinary Zimbabweans. In June, 2000 election, Mugabe's party scored a narrow win.

Recent Events: Ruling Zanu-PF party won an overwhelming majority of seats in a newly-created upper house of parliament, the Senate. The opposition MDC split over its leader's decision to boycott the poll. In May 2006, year-on-year inflation exceeded 1,000%.

Mission In India: High Commission of the Republic of Zimbabwe, 6/2, B-Block, Connaught Place, New Delhi-110 048. Tel: 26111111, 26111112; Fax: 26111113

Vasant Vihar, New Delhi-110057, Tel: 26140430, 26140431; Fax:26154316.

E-mail:zimdelhi@vsnl.net

Indian Mission in Zimbabwe: High Commis-

sion of India, No. 12, Natal Road, Belgravia, Post Box 4620, Harare, Zimbabwe. Tel: 00-263-4-795955; Fax: 00-263-4-722324.

E-mail:hcihre@internet.co.zw

The United Nations

The name 'United Nations' was devised by United States President Franklin D. Roosevelt and was first used in the Declaration by United Nations of 1 Jan. 1942, during the Second World War, when representatives of 26 nations pledged their Governments to continue fighting together against the Axis Powers.

The United Nations is the hope and conscience of the world, more especially of the smaller nations among its 191 members. It is an association of states which have pledged themselves to maintain international peace and security and co-operate in solving international political, economic, social, cultural and humanitarian problems towards achieving this end.

The United Nations Charter, the constituting instrument of the UN, was drawn up by the representatives of 50 countries at the United Nations Conference on International Organisation, which met in San Francisco from 25 April to 26 June 1945. Those delegates deliberated on the basis of proposals worked out by the representatives of China, the Soviet Union, the United Kingdom and the United States at Dumbarton Oaks (Washington, DC) from 21 Aug. to 28 Sept. 1944. The Charter was signed on 26 June 1945 by the representatives of the 50 countries. Poland, which was not represented at the Conference, signed it later and became one of the original 51 Member States.

The United Nations officially came into existence on 24 Oct. 1945, with the deposit of the requisite number of ratifications of the Charter with the US Department of State. United Nations Day is celebrated on 24 Oct. each year.

New Member States are admitted by the General Assembly on the recommendation of the Security Council. Tuvalu was admitted in Sept, 2000 as the 189th member. East Timor was admitted as a member of the UN in September, 2002. Switzerland joined the world organisation in the same month. Montenegro became a UN member on 28 June, 2006.

In 1971 Communist China was admitted as the representative of all China. Red China thus became a permanent member of the Security Council. Taiwan lost its primary membership of the UN. Vatican is a permanent observer.

Official languages of the UN are: Arabic, Chinese, English, French, Russian and Spanish.

Flag of the UN: On the flag is the UN emblem in white centred on a light blue ground.

The UN has a post office originating its own stamps. Some 52,100 people work in the UN system.

The Secretary General Kofi Annan and the UN were jointly given the Nobel Prize for Peace in 2001.

The Year 2005 was proclaimed the International Year of physics by the UN.

Headquarters: First Avenue, UN Plaza, New York City, N.Y. 10017, USA.

Principal Organs of the UN are: General Assembly, Secretariat, Security Council, Trusteeship Council, Economic and Social Council and International Court of Justice.

General Assembly

The Assembly consists of the representatives of all the member states. Each state has one vote, but may send 5 representatives. The General Assembly meets at least once in a year. It elects its own President and Vice Presidents every year.

Security Council

Security Council consists of 15 members, each of which has one vote. There are five permanent and 10 non-permanent members elected for a 2-year term by a two-thirds majority of the General Assembly. The permanent members have the power to veto any move. Retiring members are not eligible for immediate re-election.

The Presidency of the Security Council is held for one month in rotation by the member states in the English alphabetical order of their names.

Permanent Members: China, France, Russia, UK, USA. **Non-permanent Members:** Congo, Ghana, Peru, Qatar, Slovakia (until Dec. 31, 2007), Argentina, Denmark, Greece, Japan, United Republic of Tanzania (until Dec. 31, 2006).

The expansion of the Security Council to include 'new powers' such as India, Germany and Japan as permanent members has been suggested by various fora.

Economic and Social Council

The Economic and Social Council (54 members) is responsible under the General Assembly for carrying out the functions of the United Nations with regard to international economic, social, cultural, educational, health and related matters. The Council's Regional Economic Commissions: ECE (Economic Commission for Europe, Geneva); ESCAP (Economic and Social Commission for Asia

and the Pacific, Bangkok); ECLAC (Economic Commission for Latin America and the Caribbean, Santiago, Chile); ECA (Economic Commission for Africa, Addis Ababa). ESCWA (Economic Commission for Western Asia, Amman, Jordan).

Trusteeship Council

The Charter provides for an international trusteeship system to safeguard the interests of the inhabitants of territories which are not yet fully self-governing and which may be placed thereunder by individual trusteeship agreements. These are called trust territories.

All of the original 11 trust territories have become independent or joined independent countries.

Members: China, France, Russia, UK, USA.

International Court

The International Court of Justice was created by an international treaty, the Statute of the Court, which forms an integral part of the United Nations Charter. All members of the United Nations are ipso facto parties to the Statute of the Court. There are 15 judges. Headquarters : The Peace Palace, 2517 KJ The Hague, Netherlands.

The 15 judges are elected for 9-year terms by the General Assembly and the Security Council. Retiring judges are eligible for re-election. The court remains permanently in session, except during vacations. All questions are decided by majority.

Website: <http://www.icj-cij.org>

President : Shi Juyong (China)

Registrar: Philippe Couvreur (Belgium)

The Court has its seat at The Hague, but may sit elsewhere whenever it considers this desirable. The expenses of the Court are borne by the UN.

Languages: French and English.

The Secretariat

The Secretariat is composed of the Secretary-General, who is the chief administrative

officer of the organisation and an international staff appointed by him under regulations established by the General Assembly. However, the Secretary General, the High Commissioner for Refugees and the Managing Director of the Fund are appointed by the General Assembly. HQ : United Nations Plaza, New York, NY 10017, USA.

Website: <http://www.un.org>

Secretary-General: Kofi Annan (Ghana) was appointed on 1st January, 1997 for a five-year term. He has been re-elected for a second term.

On Jan. 12, 1998, Louise Frechette (Canada) was appointed Deputy Secretary-General.

In addition to the 18 independent specialised agencies, there are some 14 major United Nations programmes and funds devoted to achieving economic and social progress in the developing countries.

United Nations Development Programme

United Nations Development Programme (UNDP), is the world's largest agency for multilateral, technical and pre-investment co-operation. It is the funding source for most of the technical assistance provided by the United Nations system.

HQ: New York

Administrator: Mark Malloch Brown (UK)

United Nations Children's Fund

United Nations Children's Fund (UNICEF), established in 1946 as United Nations International Children's Emergency Fund to deliver post-war relief to children, now concentrates its assistance on development activities aimed at improving the quality of life for children and mothers in developing countries.

HQ: New York

Executive Director: Ms. Ann M. Veneman (USA)

The UN Fund for Population Activities

The UN Fund for Population Activities

(UNFPA), established in 1969, carries out programmes in over 130 countries and territories. The Fund's aims are to build up capacity to respond to needs in population and family planning.

Executive Director: Ms. Thoraya Ahmed Obaid (Saudi Arabia).

UN Environment Programme (UNEP)

Established in 1972, it works to encourage sustainable development through sound environmental practices.

Executive Director: Achim Steiner (Germany).

Relief Agencies

Among the organisations involved in relief activities are the Office of the UN Disaster Relief Co-ordinator (UNDRO), the Office of the UN High Commissioner for Refugees (UNHCR) and the UN Relief and Works Agency for Palestine Refugees in the Near East (UNRWA).

Commissioner-General: Giorgio Giacomelli.

United Nations High Commissioner for Refugees

United Nations High Commissioner for Refugees (UNHCR) was established by the UN General Assembly with effect from 1 Jan. 1951.

For its work on behalf of refugees around the world, UNHCR was awarded the Nobel Peace Prize in 1955 and again in 1981.

HQ : Palais de Nations, 1211, Geneva 10, Switzerland.

High Commissioner: Antonio Guterres (Portugal)

High Commissioner for Human Rights

The post was established in 1993. The Commission has 53 members.

High Commissioner : Louise Arbour (Canada)

Specialised Agencies

International Atomic Energy Agency

International Atomic Energy Agency (IAEA),

came into existence on 29 July 1957. Member States: 138.

HQ: Vienna International Centre, P.O. Box 100, A-1400 Vienna, Austria.

Website: <http://www.iaea.or.at/worldatom>

Director-General: Mohamed El Baradei (Egypt).

United Nations Industrial Development Organisation

United Nations Industrial Development Organisation (UNIDO), provides developing and underdeveloped countries with advice on all aspects of industrial policy. Converted into a specialised agency of UN in 1985.

HQ: Vienna International Centre, P.O. Box 300, A-1400 Vienna, Austria.

Website: <http://www.unido.org>

Director-General: Carlos Alfredo Maganinos

Food and Agriculture Organisation (FAO)

The UN Conference on Food and Agriculture in May 1943, at Hot Springs, Virginia, set up an Interim Commission in Washington in July 1943 to plan the FAO, which came into being on 16th October 1945. Sponsors the World Food Programme.

HQ: Viale delle Terme di Caracalla, 00100 Rome, Italy.

Website: <http://www.fao.org>

Director-General: Jacques Diouf (Senegal)

United Nations Educational, Scientific and Cultural Organisation (UNESCO)

A Conference for the establishment of an Educational, Scientific and Cultural Organisation of the United Nations was convened by the Government of the UK in association with the Government of France, and met in London, 1 to 16 Nov. 1945. UNESCO came into being on 4 Nov. 1946.

HQ: UNESCO House, 7 Place de Fontenoy, 75352 Paris 07SP, France.

Website: <http://www.unesco.org>

UN Secretaries General

| Year | Name | Nation |
|-------|---------------------------|---------|
| 1946 | Trygve Lie | Norway |
| 1953 | Dag Hammarskjöld | Sweden |
| 1961 | U Thant | Burma |
| 1972 | Kurt Waldheim | Austria |
| 1982 | Javier Peres De Cuellar | Peru |
| 1992 | Dr. Boutros Boutros Ghali | Egypt |
| 1997- | Kofi Annan | Ghana |

Director General: Koichiro Matsuura (Japan).

World Health Organisation (WHO)

An International Conference, convened by the UN Economic and Social Council, to consider a single health organisation resulted in the adoption on 22 July 1946 of the constitution of the WHO.

HQ: Avenue Appia 20, CH-1211 Geneva 27, Switzerland

Rgl. Offices: Alexandria, Brazzaville, Copenhagen, Manila, New Delhi, Washington.

Website: <http://www.who.int>

Director-General: Lee Jong-Wook (S. Korea)

International Monetary Fund (IMF)

The International Monetary Fund was established on 27 Dec. 1945 as an independent international organisation and began operations on 1 March 1947. The IMF aims to preserve economic stability and to tackle or ideally prevent - financial crises. Over time, its focus has switched to the developing world. HQ: 700 19th St. NW, Washington, D.C., 20431, USA. Offices in Paris and Geneva.

Website: <http://www.imf.org>

Managing Director: Rodrigo de Rato (Spain)

International Bank for Reconstruction and Development (IBRD)

Conceived at the Bretton Woods Conference, July 1944, the 'World Bank' began operations in June 1946.

HQ: 1818 H. St. NW, Washington, D.C., 20433, USA

Website: <http://www.worldbank.org>

President: Paul Wolfowitz (USA)

International Development Association (IDA)

A lending agency which came into existence on 24 Sept., 1960. Administered by the World Bank, IDA is open to all members of the Bank.

International Finance Corporation

International Finance Corporation (IFC) is an affiliate of the World Bank. Established in July 1956.

HQ: 1850 Ist., NW, Washington, D.C., 20433, USA. Website: <http://www.ifc.org>

President: Paul Wolfowitz (USA)

International Civil Aviation Organisation

International Civil Aviation Organisation (ICAO) formed in Nov-Dec. 1944.

HQ: 999, University Street, Montreal, PQ, Canada H3C 5H7.

Website: <http://www.icao.org>

Secretary-General: Dr. Taieb Cherif (Algeria)

Universal Postal Union

Universal Postal Union (UPU) was established on 1 July, 1875, when the Universal Postal Convention adopted by the Postal Congress of Berne on 9 Oct. 1874 came into force.

HQ: Weltpoststrasse 4, 3000 Berne 15, Switzerland.

Website: <http://www.upu.int>

Director-General: Edouard Dayan (France)

International Telecommunication Union (ITU)

The International Telegraph Union, founded

in Paris in 1865, and the International Radiotelegraph Union, founded in Berlin in 1906, were merged by the Madrid Convention of 1932 to form the ITU.

HQ: Place des Nations, CH-1211 Geneva-20, Switzerland. Website: <http://www.itu.int>

Secretary-General: Yoshio Utsumi (Japan)

International Labour Organisation

International Labour Organisation (ILO) established in 1919 as an autonomous part of the League of Nations, is an intergovernmental agency with a tripartite structure, in which representatives of governments, employers and workers participate. In 1969 the organisation won the Nobel Peace Prize. Has 150 members.

HQ: International Labour Office, CH-1211, Geneva 22, Switzerland.

Website: <http://www.ilo.org>

Director-General: Juan Somavia (Chile).

World Meteorological Organisation (WMO)

Conference of Directors of the International Meteorological Organisation (set up in 1873), meeting in Washington in 1947, adopted a convention creating the WMO.

HQ: Case Postale 2300, CH-1211 Geneva-2, Switzerland.

Secretary-General: Michel Jarraud (France)

The International Maritime Organisation

The International Maritime Organisation (IMO) was established as a specialised agency of the UN by the UN Maritime Conference at Geneva in Feb./Mar. 1948.

HQ: 4 Albert Embankment, London SE1 7SR, UK. Website: <http://www.imo.org>

Secretary-General: Efthimios Mitropoulos (Greece)

World Trade Organisation

The World Trade Organisation (WTO) is

Member States of the UN (Nation/Year of admission)

| | | | | | |
|--------|------|-----------------------|------|---------------------------------|------|
| Uganda | 1946 | 65. Germany | 1973 | 129. Nigeria | 1960 |
| Uganda | 1955 | 66. Ghana | 1957 | 130. Norway | 1945 |
| Uganda | 1962 | 67. Greece | 1945 | 131. Oman | 1971 |
| Uganda | 1993 | 68. Grenada | 1974 | 132. Pakistan | 1947 |
| Uganda | 1976 | 69. Guatemala | 1945 | 133. Palau | 1994 |
| Uganda | 1981 | 70. Guinea | 1958 | 134. Panama | 1945 |
| Uganda | 1945 | 71. Guinea-Bissau | 1974 | 135. Papua New Guinea | 1975 |
| Uganda | 1992 | 72. Guyana | 1966 | 136. Paraguay | 1945 |
| Uganda | 1945 | 73. Haiti | 1945 | 137. Peru | 1945 |
| Uganda | 1955 | 74. Honduras | 1945 | 138. Philippines | 1945 |
| Uganda | 1992 | 75. Hungary | 1955 | 139. Poland | 1945 |
| Uganda | 1973 | 76. Iceland | 1946 | 140. Portugal | 1955 |
| Uganda | 1971 | 77. India | 1945 | 141. Qatar | 1971 |
| Uganda | 1974 | 78. Indonesia | 1950 | 142. Romania | 1955 |
| Uganda | 1966 | 79. Iran | 1945 | 143. Russia | 1945 |
| Uganda | 1945 | 80. Iraq | 1945 | 144. Rwanda | 1962 |
| Uganda | 1945 | 81. Ireland, Rep. of | 1955 | 145. St. Kitts and Nevis | 1983 |
| Uganda | 1981 | 82. Israel | 1949 | 146. St. Lucia | 1979 |
| Uganda | 1960 | 83. Italy | 1955 | 147. St. Vincent and Grenadines | 1980 |
| Uganda | 1971 | 84. Jamaica | 1962 | 148. Samoa | 1976 |
| Uganda | 1945 | 85. Japan | 1956 | 149. San Marino | 1992 |
| Uganda | 1992 | 86. Jordan | 1955 | 150. Sao Tome & Principe | 1975 |
| Uganda | 1966 | 87. Kazakhstan | 1992 | 151. Saudi Arabia | 1945 |
| Uganda | 1945 | 88. Kenya | 1963 | 152. Senegal | 1960 |
| Uganda | 1984 | 89. Kiribati | 1999 | 153. Seychelles | 1976 |
| Uganda | 1955 | 90. Korea (North) | 1991 | 154. Sierra Leone | 1961 |
| Uganda | 1960 | 91. Korea (South) | 1991 | 155. Singapore | 1965 |
| Uganda | 1962 | 92. Kuwait | 1963 | 156. Slovakia | 1993 |
| Uganda | 1955 | 93. Kyrgyzstan | 1992 | 157. Slovenia | 1992 |
| Uganda | 1960 | 94. Laos | 1955 | 158. Solomon Islands | 1978 |
| Uganda | 1945 | 95. Latvia | 1991 | 159. Somalia | 1960 |
| Uganda | 1975 | 96. Lebanon | 1945 | 160. South Africa | 1945 |
| Uganda | 1960 | 97. Lesotho | 1966 | 161. Spain | 1955 |
| Uganda | 1960 | 98. Liberia | 1945 | 162. Sri Lanka | 1955 |
| Uganda | 1945 | 99. Libya | 1955 | 163. Sudan | 1956 |
| Uganda | 1945 | 100. Liechtenstein | 1990 | 164. Suriname | 1975 |
| Uganda | 1945 | 101. Lithuania | 1991 | 165. Swaziland | 1968 |
| Uganda | 1975 | 102. Luxembourg | 1945 | 166. Sweden | 1946 |
| Uganda | 1960 | 103. Macedonia | 1993 | 167. Switzerland | 2002 |
| Uganda | 1960 | 104. Madagascar | 1960 | 168. Syria | 1945 |
| Uganda | 1945 | 105. Malawi | 1964 | 169. Tajikistan | 1992 |
| Uganda | 1960 | 106. Malaysia | 1957 | 170. Tanzania | 1961 |
| Uganda | 1992 | 107. Maldives | 1965 | 171. Thailand | 1946 |
| Uganda | 1945 | 108. Mali | 1960 | 172. Togo | 1960 |
| Uganda | 1960 | 109. Malta | 1964 | 173. Tonga | 1999 |
| Uganda | 1993 | 110. Marshall Islands | 1991 | 174. Trinidad and Tobago | 1962 |
| Uganda | 1945 | 111. Mauritania | 1961 | 175. Tunisia | 1956 |
| Uganda | 1977 | 112. Mauritius | 1968 | 176. Turkey | 1945 |
| Uganda | 1978 | 113. Mexico | 1945 | 177. Turkmenistan | 1992 |
| Uganda | 1945 | 114. Micronesia | 1991 | 178. Tuvalu | 2000 |
| Uganda | 2002 | 115. Moldova | 1992 | 179. Uganda | 1962 |
| Uganda | 1945 | 116. Monaco | 1993 | 180. Ukraine | 1945 |
| Uganda | 1945 | 117. Mongolia | 1961 | 181. United Arab Emirates | 1971 |
| Uganda | 1945 | 118. Montenegro | 2006 | 182. UK | 1945 |
| Uganda | 1968 | 119. Morocco | 1956 | 183. USA | 1945 |
| Uganda | 1993 | 120. Mozambique | 1975 | 184. Uruguay | 1945 |
| Uganda | 1991 | 121. Myanmar | 1948 | 185. Uzbekistan | 1992 |
| Uganda | 1945 | 122. Namibia | 1990 | 186. Vanuatu | 1981 |
| Uganda | 1970 | 123. Nauru | 1999 | 187. Venezuela | 1945 |
| Uganda | 1955 | 124. Nepal | 1955 | 188. Vietnam | 1977 |
| Uganda | 1945 | 125. Netherlands | 1945 | 189. Yemen | 1947 |
| Uganda | 1960 | 126. New Zealand | 1945 | 190. Yugoslavia | 1945 |
| Uganda | 1965 | 127. Nicaragua | 1945 | 191. Zambia | 1964 |
| Uganda | 1992 | 128. Niger | 1960 | 192. Zimbabwe | 1980 |

an international body whose purpose is to promote free trade by persuading countries to abolish import tariffs and other barriers. As such, it has become closely associated with globalisation.

Based in Geneva, the WTO was set up in 1995, replacing another international organisation known as the General Agreement on Tariffs and Trade (GATT). The WTO has a much broader scope than GATT regulated trade in merchandise goods, the WTO also covers trade in services, such as telecommunications and banking and other issues such as intellectual property rights.

HQ: Centre William Rappard, 154 rue de Lausanne, CH-1211 Geneva 21, Switzerland.

Website: <http://www.wto.org>

Director General: Pascal Lamy (France)

World Intellectual Property Organisation (WIPO)

The Convention establishing WIPO was signed at Stockholm in 1967 by 51 countries and came into force in April 1970. In Dec 1974 WIPO became a specialised agency of the UN.

HQ: 34, Chemin des Colombettes, 1211 Geneva 20, Switzerland.

Website: <http://www.wipo.int>

Director-General: Dr. Kamil Idris (The Sudan)

International Fund for Agricultural Development (IFAD)

The agency began its operations in Dec 1977.

HQ: 107 Via del Serafico, Rome 00142 Italy. Website: <http://www.ifad.org>

President: Lennart Bage (Sweden).

Reforming the UN

T.P.Sreenivasan

Formerly India's Ambassador & Dy. Permanent Representative to UN

For a human institution with universal reach in a changing world, the United Nations has remained surprisingly unchanged in form for sixty years and its charter has remained largely unaltered. The complex procedure for amending the charter has deterred frequent changes and its proven resilience in the face of grave challenges has enabled the UN to meet the needs of the vastly expanded membership and the greatly transformed agenda without fundamental change. The resolutions, declarations and treaties, adopted over the years, have enriched international law. Many important intergovernmental and secretariat bodies have been created under the principal organs of the

UN. As a result, the UN has remained dynamic, credible and modern. But the quest for reform continues, if only to get the organization to acknowledge the evolution in international law and to reflect the realities of the world situation.

The reform effort, which began soon after the UN Charter came into force, can be broadly grouped into two clusters; the first relating to structural reforms to accommodate the physical changes in the world, like the exponential increase in the number of members and the changes in the political map of the world and the second relating to the functioning of the various organs of the UN. But restructuring in terms of amendments to the Charter has no

gone beyond the barest minimum. So far, only three amendments have been made to the Charter. In 1965, the UN Security Council was expanded from 11 to 15. In 1965, the Economic and Social Council (ECOSOC) was expanded from eighteen to twenty-seven. The ECOSOC was again expanded from 27 to 54 in 1973. Elementary things like changing the names of the permanent members from the Republic of China to the People's Republic of China and the Union of Soviet Socialist Republics to the Russian Federation have not been done yet and the charter still has the "enemy clause" to characterize the losers of the second world war, who are now highly respected members of the organization. In a way, it is a tribute to the framers of the charter that the UN has not collapsed under the weight of the monumental changes in the world since 1945.

Democracy Deficit

The "democracy deficit" of the UN, which has been consciously embedded in the UN charter, has been the most controversial element. In an organization which proclaims sovereign equality among its members, some are "more equal" than others. One nation one vote principle applies only to the General Assembly. The Security Council, the repository of the power to make war and peace, has remained in the grip of the veto-wielding permanent members, without whose support, no decisions can be taken. A further dimension was added to the powers of the permanent members when it came to be recognized that even an abstention by a permanent member is sufficient to take decisions. Once the agreement among the permanent members, with abstention from China, became a possibility after the cold war, it became clear that issues of fundamental importance to the developing world would be settled by the developed world. The demand for the expansion of the Security Council assumed importance in this context.

India had initiated a move in 1979 to expand the non-permanent membership of the Security Council on the basis that the ratio between the general membership and the Security Council members should be preserved at 1945 level. Although the proposal had the support of a majority of the member states, no vote was taken on it as the permanent members made it clear that they would not support it. But after the cold war, some of the permanent members themselves favoured the induction of Japan and Germany as permanent members. When the pressure mounted for including developing countries from Asia, Africa and Latin America as permanent members, the idea of an expansion was virtually abandoned.

High Level Panel

The reform of the Security Council, together with other ideas of reform, surfaced again when the Secretary General constituted a High Level Panel in 2004 to examine the whole gamut of issues arising from terrorism and other threats to international peace and security. The panel was unable to make a single recommendation on the expansion of the Security Council. Instead, it made two recommendations, which was like making no recommendation at all. As the first option, it suggested an addition of six new permanent members, two each from Africa and Asia and one each from Europe and Americas and three non-permanent members. In the second option, it proposed no additional permanent seats, but eight seats with four-year renewable terms, a kind of a rotational system of semi-permanent members. Under this option, there will also be one additional non-permanent seat.

The Secretary General modified some of the Panel's recommendations when he put them forward to the General Assembly in a report, entitled "In Larger Freedom", but presented both the alternatives for reform of the Security Council to the sixtieth anniversary UN summit. He stressed that the summit should choose one of

the two options or devise a third method by which the Council could be reformed to bring it closer to the realities of the political situation. He suggested a decision by consensus, but added that reform should go forward by voting, if necessary. The reform package presented by the Secretary General did not make much headway and there was no question of a consensus on the expansion of the Security Council. The permanent members, particularly the United States, did not want an expansion of the Council to the extent suggested.

In an ill-advised move, four of the candidates, India, Brazil, Germany and Japan (G-4) presented a resolution on expansion on the basis of the first alternative of the Panel report in the expectation that it would receive a two third majority in the General Assembly. The plan was to present a fait accompli to the permanent members to force them to ratify the changes. UK and France supported the move, but the US, Russia and China opposed it in different degrees and ensured that the resolution was not even put to a vote. The African group refused to support the G-4 resolution on the ground that the resolution did not seek veto for the new permanent members. Japan also dissociated from the G-4 approach when it realized that it had a better chance of becoming a permanent member on its own rather than in the company of G-4. In actual fact, the Africans were not able to agree on two candidates from Africa. Moreover, they succumbed to the pressure from the US not to join the G-4 exercise. The US position is that a limited expansion is possible, but the immediate priority is to bring in financial and management reform and not reform of the Security Council. Most of the developing countries, however, are not ready to bring in the kind of reform that the US has presented. The expansion proposal has once again receded into the background.

The discussion on the functioning of the Security Council in a Working Group since 1992 has brought about some marginal im-

provements in the accountability of the Council to the General Assembly. Methods were devised, without any changes in the charter or the Rules of Procedure, to share information with the general membership of the UN. The number of open meetings were increased to seek the views of the non-members of the Security Council. Troop contributors were brought into a consultation mechanism so that the Council could take informed decisions on peacekeeping operations. The Presidents of the Council began briefing the general membership on the Council's activities. These were not changes in substance as the briefings did not cover the discussions in the Council's informal consultations and they did not reveal anything that was not known to the membership. But the acknowledgement of the accountability of the Council to the General Assembly itself was a major advance.

Agenda for Peace

Soon after the end of the cold war, the Secretary General, Boutros Ghali, put forward a set of proposals for reform in his "An Agenda for Peace" in 1992. It was essentially a codification of the changes that had taken place over the years. But some of the elements in his proposals, such as dilution of sovereignty, setting up of a standing force for the UN and strengthening of the post of the Secretary General himself proved contentious and only marginal reform in peacekeeping operations was accomplished. His proposals in "An Agenda for Development" were even less successful as the developed countries were not willing to take on additional financial responsibilities.

The reform proposals advanced by the Secretary General in 2005 went beyond the Security Council. These included reform of the General Assembly itself in terms of rationalizing its work and agenda, replacement of the Human Rights Commission by a smaller Human Rights Council with greater authority, setting up of a Peacebuilding Commission and man-

agement reforms to give greater leeway to the Secretary General in matters relating to the budget. The reforms accomplished so far are the setting up of the Peacebuilding Commission and the Human Rights Council. Even these did not go far enough to change the present situation. The management reform was also rejected by the General Assembly. Some cosmetic changes were made, but they did not meet the demands of countries like United States to bring about overall reform. Even the proposal to remove anachronistic references to the "enemy States", Military Staff Committee and the Trusteeship Council were not accepted. The United States had made the approval of the UN budget subject to satisfactory reform and, in the absence of US certification of reform, a budgetary crisis looms large.

It is universally recognized that the UN needs drastic reform to reflect the changes of the last 60 years. But the diverse interests in the UN are

concerned that the changes will result in altering the balance of rights and obligations of member states, obtained in 1945. Moreover, the organization has adjusted itself to changing realities without fundamental changes in the charter. New priorities have been established within the broad parameters of the charter because of inventive interpretations of the charter. Issues like terrorism, nuclear arms and human rights have come to the forefront even though they are not mentioned in the charter. The Security Council remains a body of five, but there is no formula which can ensure the acceptance of the two-thirds majority, including the five permanent members, for all its inadequacies, the UN is perceived as an indispensable role and is expected to reform. A major concern is that the changes will throw the entity out into the cold.

Secretary-General: Ong Keng Yong
(Singapore)

Caribbean Community and Common Market (CARICOM)

Established in 1973.

HQ: Bank of Guyana Building, PO Box 10827, Georgetown (Guyana).

Website: <http://www.caricom.org>

Secretary-General: Edwin W. Carrington
(Trinidad and Tobago)

Commonwealth of Independent States

Commonwealth of Independent States (CIS), created Dec. 1991 upon the disbanding of the Soviet Union. It is made up of 12 of the 15 former Soviet constituent republics. Members in 1995 were Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan. The capital of the commonwealth is Minsk, Belarus.

HQ: 220000 Minsk, Kirava 17, Belarus

Website: <http://www.cis.minsk.by>

Executive Secretary: Yuri Yarov.

The Commonwealth is an organisation of nations and dependencies that were once part of the former British empire. There are 54 members. The British monarch is the symbolic head of the Commonwealth.

Commonwealth Heads of Government Meet

Formerly known as the British Commonwealth of Nations, the Commonwealth is a loose association of former British colonies, dependencies and other territories - and Mozambique, which has no historical ties to Britain.

The Commonwealth has no constitution or charter, but the heads of government of its member states hold Commonwealth Heads of Government Meetings (CHOGM) every two years to discuss issues of common interest.

Founded: 1931

Members: 53 states

HQ (Secretariat): Marlborough House, Pall Mall, London. SW1Y 5HX, UK.

Website: <http://www.thecommonwealth.org>

Secretary-General: Donald C McKinnon
(New Zealand).

European Union Known as the European Community

European Union was known as the European Community (EC) until 1994. The name covers 3 organisations with common membership: the European Economic Community (Common Market), European Coal and Steel Community, and European Atomic Energy Community (Euratom). The European Union covers a large part of the continent of Europe. In 2004, its membership increased from 15 to 25. The ten new countries which joined the EU in 2004 are: Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia. When two more countries join in 2007, the EU will have a population of nearly half a billion.

HQ: 200 rue de la Loi/Wetstraat, B-1049 Brussels, Belgium

President, European Commission: Romano Prodi (Italy).

Website: <http://www.europa.eu.int>

Sec. Gen.: David O'Sullivan (Ireland)

European Economic Area

European Economic Area (EEA) came into existence from Jan. 1, 1994 as a preliminary step of a proposed merger of EFTA and EC over the coming decade.

European Space Research Organisation

European Space Research Organisation (ESRO) was formally established in 1964 to promote collaboration among European States in space research and technology exclusively for peaceful purposes. The members are Belgium, Denmark, France,

West Germany, Italy, the Netherlands, Spain, Sweden, Switzerland and UK. Austria, Ireland and Norway participate as observers.

HQ: Paris.

French Community

French Community offers to the French overseas territories, which manifest their will to adhere to it, new institutions based on the common idea of liberty, equality and fraternity and conceived with a view to their democratic evolution.

Independent members of the Community are: French Republic, Central African Republic, Republic of Congo, Gabon, Senegal, Chad, Madagascar, & Djibouti.

Group of Eight

With no headquarters, budget or permanent staff, the Group of Eight is an informal but exclusive body whose members set out to tackle global challenges through discussion and action. The G8 comprises seven of the world's leading industrialised nations, and Russia.

- **Founded:** 1975, Rambouillet, France
- **Original Members:** France, Germany, Italy, Japan, UK, US.
- **Later Members:** Canada (joined at 1976 summit, San Juan, Puerto Rico), Russia (joined at 1998 summit, Birmingham, UK)

Gulf Co-operation Council (GCC)

The Gulf Co-operation council, or GCC, is a loose political and economic alliance made up of six Gulf states. It aims to boost economic cooperation between members and, through collective security, to guard against any threat from neighbouring states and from Islamic terrorism.

The GCC was formed in May 1981 against the backdrop of the Islamic revolution in Iran and the Iraq-Iran war. Its members - Saudi Arabia, Kuwait, the United Arab Emirates, Oman, Qatar and Bahrain - share similar po-

litical systems and a common social and cultural outlook. They are autocratic monarchies or sheikhdoms, with limited or non-existent political participation.

HQ: Riyadh (Saudi Arabia).

Sec. Gen: Abdul-Rahman Al-Atiyyah

The International Air Transport Association

The International Air Transport Association (IATA) was founded in 1945 to promote safe, regular and economical air transport and to provide a forum for collaboration. Members are international and domestic airlines.

Main offices: IATA Centre, Route de l'Aéroport 33, PO Box 416, CH-1215 Geneva, Switzerland; 800 Place Victoria, PO Box 113, Montreal, Quebec, Canada H4Z 1M1; 77 Robinson Road, #05-00 SIA Building, Singapore 068896.

Website: <http://www.iata.org>

Director-General: Giovanni Bisignani

INTERPOL

Interpol is the world's largest international police organisation, with 184 member countries. Created in 1923, it facilitates cross-border police co-operation, and supports and assists all organisations, authorities and services whose mission is to prevent or combat international crime.

HQ: Quai Charles de Gaulle, 69006 Lyon, France.

Website: <http://www.interpol.int>

Secretary-General: Ronald K. Noble

North Atlantic Treaty Organisation (NATO)

In 1949, the foreign ministers of Belgium, France, Luxembourg, the Netherlands, UK, Canada, Denmark, Iceland, Italy, Norway, Portugal and USA met in Washington and signed the North Atlantic Treaty. Greece and Turkey (1952), the Federal Republic of Germany (1955) Spain (1982).

The Czech Republic, Hungary and Poland

Comoros, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Palestine L.O., Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, UAE, and Republic of Yemen.

HQ: Al Tahrir Square, Cairo, Egypt.

The Secretariat has its seat in Cairo.

Secretary General: Amre Moussa (Egypt).

Organisation of Petroleum Exporting Countries

Organisation of Petroleum Exporting Countries (OPEC) created in Sept., 1960, OPEC attempts to set world oil prices by controlling oil production. It also pursues members' interests in trade and development dealings with industrialised oil-consuming nations.

Members (1998): Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates and Venezuela.

HQ: Obere Donaustrasse 93, A-1020 Vienna, Austria.

Website: <http://www.opec.org>

Secretary-General: Ahmad Fahad Al-Ahmad Al Sabah (Kuwait)

Non-Aligned Movement

The Non-Aligned Movement (NAM) is made up of 114 developing countries and aims to represent the political, economic and cultural interests of the developing world. The principles of non-alignment were defined in the Bandung (Indonesia) Declaration of 1955 and reiterated in the Brioni (Yugoslavia) Declaration of 1956 by Jawaharlal Nehru, Josip Broz Tito, and Gamel Abdil Nasser. The first Non-aligned Conference was held at Belgrade in 1961 in which 25 countries participated. The basic thrust of the movement is in favour of peace, disarmament, development, independence, eradication of poverty and illiteracy.

Chairman: Abdullah Ahmad Badawi (Malaysia).

South Asian Association for Regional Co-operation

South Asian Association for Regional Co-operation (SAARC), comprises India, Maldives, Pakistan, Bangladesh, Sri Lanka, Bhutan and Nepal. It was launched following the Dacca Summit in early December 1985.

Members of ASEAN, EU, NATO & OPEC

The Association of South East Asian Nations (ASEAN)

Member Countries (10)

Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam.

European Union (EU)

Member Countries

(25): Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany,

Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, The Netherlands, United Kingdom.

North Atlantic Treaty Organisation (NATO)

Member Countries (26)

Belgium, Canada, Denmark, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Luxembourg, Malta, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, The Netherlands, United Kingdom, United States.

way, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Turkey, United Kingdom, United States.

Organisation of Petroleum Exporting Countries (OPEC)

Member Countries

(13): Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, Sudan, Tunisia, United Arab Emirates, Venezuela.

HQ: POBOX:4222, Kathmandu, Nepal.
Secretary-General: Chenkyab Dorji
(Bhutan)

Non-governmental Organisations **Amnesty International**

A world-wide human rights organisation, established on May 28, 1961 with a newspaper appeal by the British lawyer Peter Berenson. Now it has more than 11,00,000 members in more than 150 countries with 6000 local groups in 70 countries in Africa, the Americas, Asia, Europe and the Middle East. It won the Nobel Prize for Peace in 1977.

International Secretariat: 99-119 Rosebery Avenue, London, EC1R 3RE, UK

Website: <http://www.amnesty.org>

Secretary General: Ms. Irene Zubaida Khan

Red Cross

International Society for relief of suffering in time of war or disaster. International Committee of Red Cross was founded (1863) on advocacy of J.H. Dunant (1828-1910). Delegates from 14 countries adopted Geneva Convention (1864), providing for neutrality of personnel treating wounded etc. Over 100 national Red Cross societies now exist. Awarded Nobel Peace Prize (1917, 1944, 1963).

HQ: 19 avenue de la Paix, CH-1202 Geneva, Switzerland

Website: <http://www.icrc.org>

President: Jakob Kellenberger

Scouts and Guides

Scouting is a worldwide organised movement for young people started by an Englishman, Lieutenant General Sir Robert S.S. Baden-Powell (1857-1941) in 1907. He gave boys out-door skills which he had illustrated well in his book explaining scouting, tracking and map-making skills. The movement's goals include encouraging good character, loyalty to God and country, service to other people and physical and mental fitness. "Be Prepared" is the slogan. The movement had about 13 million members in 115 nations in 1982. The World Scouts Bureau is in Geneva, Switzerland.

A similar movement for girls – the Girl Guide Movement – was founded by Baden-Powell and his sister Agnes in 1910.

The World Council of Churches

The World Council of Churches (WCC) was formally constituted on 23rd Aug. 1948, at Amsterdam, by an assembly representing 147 Churches from 44 countries. By 1989 the member Churches numbered over 330, from more than 100 countries.

HQ: PO Box 2100, 150 route de Ferney, 1211 Geneva 2, Switzerland.

Website: <http://www.wcc-coe.org>

General Secretary: Rev. Dr. Samuel Kobia (Germany).

World Religions

Religions evolved as a set of beliefs concerning the cause, nature and purpose of the universe and grew as an

organised system of beliefs that bound people to become a close-knit society.

| Religion | World Population | New-Religionists | |
|---------------------------|------------------|--------------------|-------------|
| Christians | 2,069,883,000 | Sikhs | 105,106,100 |
| Roman Catholics | 1,092,853,000 | Jews | 24,295,200 |
| Protestants | 364,530,000 | Spiritists | 14,551,000 |
| Orthodox | 217,030,000 | Baha'is | 12,732,600 |
| Anglicans | 79,988,000 | Confucians | 7,503,000 |
| Muslims | 1,254,222,000 | Jains | 6,425,300 |
| Hindus | 837,262,000 | Shintoists | 4,413,700 |
| Chinese folk religionists | 398,106,300 | Zoroastrians | 2,680,300 |
| Buddhists | 372,974,000 | Other religionists | 2,733,900 |
| Ethnic religionists | 238,096,000 | Non-religious | 1,118,000 |
| | | Atheists | 784,269,000 |
| | | | 148,660,000 |

World Languages

There are thousands of languages in the world, but most of them have few speakers compared with the major tongues. Some experts predict that between 50 and 90 percent of the world's languages will become extinct this century. Languages need at least 100,000 speakers to survive.

Major Languages

| Language | Speakers (in Million) | * Principal Areas |
|-------------------|-----------------------|--------------------------------------------------|
| Chinese, Mandarin | 873 | China, Taiwan |
| Spanish | 322 | Spain, Latin America |
| English | 309 | UK, USA, Canada, Ireland, Australia, New Zealand |
| Hindi | 180 | North India |
| Portuguese | 177 | Portugal, Brazil |
| Bengali | 171 | India, Bangladesh |
| Russian | 145 | Russia, The CIS |
| Japanese | 122 | Japan |
| German, standard | 95 | Germany, Austria, Switzerland |
| Chinese, Wu | 77 | China |

| | | |
|------------------|----|-----------------------------------------|
| Japanese | 75 | 75 Japan (Indonesian) |
| Telugu | 69 | 69 Andhra (India) |
| Marathi | 68 | 68 Maharashtra (India) |
| Vietnamese | 67 | Vietnam |
| Korean | 67 | North & South Korea, China, Japan |
| Tamil | 66 | Tamil Nadu (India), Sri Lanka, Malaysia |
| French | 64 | France, Belgium, Canada, Switzerland |
| Italian | 61 | Italy |
| Punjabi, Western | 60 | Pakistan |
| Urdu | 60 | India, Pakistan |
| Chinese, Yue | 54 | China |
| Turkish | 50 | Turkey |
| Arabic, Egyptian | 46 | Egypt |
| Chinese, Min Nan | 46 | China |
| Gujarati | 46 | Gujarat (India) |
| Chinese, Jintu | 45 | China |
| Parsi | 42 | Iran |
| Ukrainian | 39 | Ukraine, Russia |
| Chinese, Xiang | 36 | China |
| Malayalam | 35 | India |
| Kannada | 35 | India |

jectives of advancing trade and development and maintaining the stability of the international monetary system, though it has been shaken by a series of crises over the last three decades; but the dramatic shifts in the economic power of nations, especially of Asia, and the paramount importance of ending global poverty, hunger and disease calls for new mechanisms which are more responsive to the needs and urges of the vast majority of mankind. The United Nations system, itself in the process of some reform and revitalization, has called for an overhauling of the international economic institutions and policies which are no longer as relevant as they may have been in the past.

Trends in trade and capital flows are reviewed briefly in the following paragraphs. What is of great concern is that despite robust growth of the world economy, driven by not only USA but also China, India and other dynamic economies in Asia, there is no visible impact on narrowing of rich-poor income disparities while even in fast-growing major developing countries, the rural-urban divide has been widening. Also, the output expansion of recent years has not been accompanied by employment generation matching the rise in the adult work force. The number of unemployed had risen to 192 million in 2005, half of them young men and women, a situation which could potentially have serious social and economic consequences.

Challenge of Poverty

Global poverty remains the biggest social challenge. Some 1.2 billion people are living on less than a dollar a day in the international measurement of poverty - and more than two million people on less than two dollars a day. Though poverty reduction became a central objective of development for over two or three decades, the recorded progress so far falls short of expectations, partly due to ineffective or mismanaged implementation of

schemes to benefit the poor. There have been impressive gains in a few emerging economies in East Asia, notably China and moderate progress in South Asia - home of half of world's poor - but there is virtual stagnation in sub-Saharan Africa.

The Millennium Development Goals on social development including reduction of poverty by one-half by 2015, adopted by the international community at a UN Summit in 2000, may not be fully achieved, even in India. These goals, apart from poverty reduction, included alleviation of hunger and malnutrition, achieving universal literacy, decline in infant and maternal mortality rates, gender equality in school enrolment and empowering women, and ensuring environmental sustainability. Global monitoring of these goals shows that some of the rapidly growing economies could reduce poverty by half but most would fail on other social targets, barring Sub-Saharan Africa, which is unlikely to meet any of the goals.

Troubled Transition

The twenty-first century opened on a troubled note, terrorism posing the greatest threat to a world since the end of the Second World War sixty years ago, and nation-states are encountering new challenges, both geopolitical and economic, not foreseen in the latter part of the 20th century. The Millennium has not ushered in an era of relative peace and harmonious development for the peoples of the world, especially for the two-thirds of them in the developing world. To

insurgent violence, local conflicts, ethnic cleansing and state tyranny has been added terrorism in various manifestations on a global scale. All these are impacting on the normal life of peace-loving peoples all over the world in as much as these extremists are inflicting considerable damage to human productive assets entailing loss of life, communities and C

case of developing countries, slow down the wheels of progress.

On the economic and social side, with which this review of Global Economy is concerned, recent years have seen the explosive surge in the price of oil, which lubricates the global economy, hurting more seriously economies of oil-importing developing countries. The resulting significant rises in domestic costs and spiralling of consumer prices lead in turn to firming up of interest rates which could dampen growth. Also, the heavier import bills cause a drain on the foreign exchange reserves of these countries. Secondly, global imbalances, though relatable to a small group of countries (USA with a huge current account deficit matched by large trade and capital account surpluses of oil-exporters and a few emerging economies, mainly Asian, are raising fears of a sudden unwinding leading to exchange rate volatility and financial market destabilization with potentially negative impact on growth and development of other developing economies. Thirdly, the spread of

globalisation relying on market forces has, far from creating new growth opportunities for the developing countries, not only accentuated the rich-poor divide but also failed to lower levels of unemployment even if jobs are generated in a few high-tech sectors for skilled professionals. Votaries of globalisation, however, keep urging countries to undertake structural reforms to reap the gains and avoid the risks inherent in the free play of market forces.

Structural Changes

The world economy has been undergoing transformation gradually over the last century and the twenty-first century has already ushered in the Information Technology and a Communications Revolution which would have a great impact on the operation of the economic system. Structural changes are under way as there is growing rivalry for global

competitiveness, as reflected in not only the outsourcing of business services in the IT sector but also location of manufactures in countries providing low-cost labour and natural resources. Production processes in the global economy are thus getting more integrated.

These may be contributing to global productivity and supply of labour, skilled and low-skilled, and should normally help keep prices of products lower. Multinational firms from both developed and developing countries have been acquiring business abroad through mergers and acquisitions, which now make up the larger part of foreign direct investment flows. But not all developed nations which have for long embraced capitalism observe the rules of economic liberalism that globalisation implies. Many leading countries in Europe and North America are seeking to restrict foreign investments in certain sectors or prevent take-over bids, without allowing choices to economic players. "Strategic concerns" and security considerations are cited for such restrictive policies which are complemented by trade protectionism undermining free flow of goods and services within the rules and disciplines of the multilateral trading system (WTO).

Doha Round

Global trade in goods and services can undergo radical changes if the Doha Development Round of multilateral trade negotiations can be successfully concluded. In mid-2006, even after five years of its launching, the Doha Round had made no substantive progress on the key issues of trade in agriculture (reduction of domestic support for farmers, phasing out of export subsidies and greater market access all involving commitments by the richer nations, especially USA and EU) or lowering of tariffs on manufactured goods. According to the extended time tables, the negotiations were to be concluded by the end of 2006.

The Round also covers Services in which many developing countries have become competitive and seek wider markets for provision of their services including temporary movement of personnel and other trade-related issues. For the developing countries, maximum gains would come from rich countries lowering the barriers, especially for their agricultural products, and for manufactures such as textiles and garments and leather goods which they specialize. But the Round has also to ensure the development dimension in any final deal. In the event of failure of the Round, there would be danger of retreat to protectionism and greater recourse to regional and bilateral trade deals between unequal partners and further weakening of the rule-based world trading order represented by the 150-nation World Trade Organisation.

Population and Food

The world population was estimated at 6.4 billion in 2005 and the long-term projections show that by 2050, there would be 8 to 9 billion people, roughly a fifty per cent increase. Bulk of the increase in numbers would be in developing countries where the growth rates of population although declining are still higher than in the developed world. In fact, there is a declining trend in some of the industrial countries, mainly in Europe including Russia. China and India alone have more than 40 per cent of the global population.

Unchecked rise in the numbers of human beings can only aggravate problems of poverty and meeting basic needs like food and water. The world is still far from realizing food security for billions of poor and many countries face severe shortage of drinking water.

There is the looming energy crisis with oil prices likely to remain at unsustainable levels for years to come and there is a desperate hunt for new discoveries of oil gas as well as for cleaner and specially renewable sources of energy.

In the industrial countries, population ageing has become the most important economic challenge as over the next 50 years, there would be rapid growth of elderly persons to be looked after by the State with dramatic reductions in the worker-dependency ratio. International migration, with an estimated 200 million people living away from their homes, roughly half of them in the developed countries, is also posing problems of management for host countries though migrants, subjected to discrimination, are absorbed to a certain extent in lower-level occupations. Also, both the industrial and developing countries face immense challenges in renovating/expanding their infrastructure to cope with an expanding world economy involving investments in trillions of dollars.

Growth & Risks

Global economy grew at 3.6 per cent in 2005 propelled by both USA, maintaining a 3.5 per cent rise, and fast-growing emerging market economies, principally China (9.9 per cent) and, to a lesser extent, India (8.4 per cent) while trade volume expanded by over 7 per cent, mainly due to continuing export momentum of developing countries. Growth in trade has been outpacing GDP growth for over a decade now. The global environment has been highly favourable in recent years for non-inflationary growth driven by robust demand, corporate investments, increased productivity and record trade and capital flows. For two years, the world has grappled with the oil price surge, rising from 25 dollars a barrel in 2000 to 65 dollars on average in 2005, without impeding growth. But the high oil prices, which touched 75 dollars in April and again in July 2006, have begun to hit consumers in both advanced and developing countries.

The IMF reported in April that the for 2006 looked even better on the

of higher growth estimates for China, India and Russia, the well-established recovery in Japan (after a decade of recession and deflation) and the emerging signs of recovery in the European Union. The recent economic reforms in China have resulted in a higher GDP in 2004 and with a nearly 10 per cent growth in 2005, China has become the fourth largest economy after USA, Japan and Germany.

A rosy picture of global growth for 2006 and 2007 has been projected though both the IMF and the World Bank have warned of the possibility of downside risks, which could be warded off in 2005, having to be encountered. These relate to an upsurge in inflation from the elevated oil prices and from a possible sudden unwinding of global financial imbalances (with growing US current account deficit of over 800 billion dollars in 2005 and rising trade surpluses and reserves of Asian emerging economies. Global growth at 3.7 and 3.5 per cent in 2006 and 2007 respectively has been projected by the World Bank.

Growth in major economies in 2006 and 2007 is estimated at 3.4 and 3.3 per cent for USA (which recorded a 5.6 per cent rise in the first quarter, rebounding from the sluggish last quarter of 2005), 2.8 and 2.1 per cent (Japan) and 2.0 and 1.9 per cent (EU). Developing countries are expected to grow by 7 per cent in 2006 but growth would be faster at above 8 per cent in East Asia for the two years (China 9.5 and 9 per cent). India's growth, which was above expectation at 8.4 per cent in 2005/06 could have a slowdown to a little over 7 per cent for these two years, according to IMF.

Yet, uncertainties were beginning to build up by mid-2006 as consumer price inflation rates in developed economies, which had remained at historically low levels (1 to 2 per cent) tended to move up, and the monetary measures were tightening in both USA and European Union. On June 29, US Federal Re-

serve raised the short-term rate to 5.25 per cent, the 17th consecutive increase, while the European Central Bank posted it at 2.75 per cent and both central banks had not ruled out further increases during the year depending on incoming data on inflation and output trends. For developed countries as a whole, CPI was above 3 per cent in May 2006, mainly due to energy prices. Global growth also tends to exert pressure on energy and raw materials markets and on prices. The other issue of major concern already referred to is the global imbalances which are likely to be even higher in 2006, in the 800-900 billion dollar range.

Meltdown in Markets

Unexpectedly, the world stock markets were thrown in turmoil for over four weeks in May-June, as investors reportedly perceived growing risks of inflation and interest rate revisions and adverse impact on growth from heightening geopolitical tensions and this triggered a wave of sell-offs. The mature markets adjusted themselves without much disruption as consumer and business confidence was unshaken but some of the emerging markets like India and Brazil saw more prolonged downturn with the largest falls in market values.

By early July, the Bombay Stock Market had substantially recovered and the sensitive index (Sensex) was well past the 10,000 mark, the high point to which it had raced in the earlier months. The IMF viewed the developments in mature markets as sharp correction of risky assets at the end of a prolonged period of accommodative monetary policy and highly liquid conditions in financial markets that had prompted a global "search for yield". It did not see it as a signal of an impending downturn. For the Indian market, which witnessed large outflows from the foreign portfolio investments, the recovery was relatively slow but by early July the market was ruling

well above its new five-digit benchmark with a balancing of ups and downs.

Global Imbalances:

First, the structural imbalance of the world economy : According to IMF classification, about thirty advanced nations led by USA, EU and Japan had a share of 52.3 per cent of global output of goods and services in 2005 while developing countries (including emerging market economies) accounted for 47.7 per cent. The largest economy, USA, had a share of 20 per cent of global output, followed by EU (14.8 per cent) and Japan 6.4 per cent. Among the developing countries, China accounted for 6.7 per cent of world output, a little higher than Japan's. It also had the highest share in output among developing countries with 15.4 per cent (India 5.9 per cent). In world exports, the share of developed nations was 68.9 per cent while developing countries accounted for around 31 per cent.

China's share of world exports was 6.7 per cent and India's, 1.3 per cent.

The problem of global imbalances has its origin in the high current account deficit of the United States over the years, reflecting mainly its large trade deficit with many trading nations, especially China with which it had a bilateral deficit of 200 billion dollars in 2005. Running twin deficits, budget and current, USA had moved from the position of a net creditor in the world to a net debtor. So long as American consumer demand for cheaper imported good holds, trade deficits would keep growing. In 2005, US current deficit was above 800 billion dollars or 6.5 per cent of its GDP and analysts expected it to further rise in 2006 and later years unless the problem was tackled on a global dimension. The rise in international prices of oil has further worsened the deficits, with USA being a leading oil importer. But in the case of the two key

developing economies China and India

with rising energy demand, China has been able to absorb the oil trade deficit in its surpluses from higher exports while India's current surplus has turned a deficit.

The increase in US deficit is matched by the growth in current account surpluses of oil exporters and that of emerging Asia economies including China. USA is able easily to finance the deficit because both oil-exporters, who have earned an extra 400 billion dollars from the higher prices of exports, and China, besides Japan, along with a few other Asian emerging economies running large trade surpluses and accumulating reserves are investing in US treasury securities. The US Government's efforts to get China to revalue its currency to reduce bilateral trade deficit to some extent did not meet with the desired response. China, however, de-linked its currency, yuan, from the dollar peg and allowed it to fluctuate within a narrow margin as determined by market forces in July 2005. Yuan's appreciation till mid-2006 was a mere 3 per cent against the 10-20 per cent revaluation US business and economists were demanding. China's stand was for achieving greater exchange rate flexibility on a gradual basis without disrupting its domestic economy.

Developing countries as a whole have for some years been having a surplus in current account (which relates to the net outcome of two-way trade, tourism, transport, investment income and outgoes, and miscellaneous receipts including remittances). Not many years ago, they were running sizeable current account deficits. Individually, there are fewer developing countries having current account deficits due mainly to the export boom over of countries like China, Korea, Malaysia and oil-exporting countries. They cover the current account deficits of low-income countries.

In 2005, developing economies China and India

a combined current surplus of 423 billion dollars as against the current account deficit of developed countries at 510 billion dollars. Here again, many industrial countries have a surplus but USA's deficit of 805 billion in 2005 has turned the current account of developed countries combined negative. The surpluses of developing countries and the deficits of developed countries, on a combined basis, will grow over the next two years. The surpluses have helped many developing nations to accumulate larger reserves of foreign exchange and they had 2.396 billion dollars of reserves at the end of 2005. China had the largest at 824 billion dollars, among developing countries, and by the first half of 2006 the figure had crossed one trillion (1,000 billion) dollars. India's reserves grew slowly to 136 billion, with some repayments, but by mid-2006 it had risen to 162 billion dollars. Reserve losses were recorded in many developed countries.

Against the background of these imbalances in trade and payments, and the unsustainable nature of the US current deficits which are set to worsen in 2006 and 2007, new efforts are being made under the auspices of the International Monetary Fund to secure a rebalancing of global growth, savings and investment. In the opinion of financial institutions and specialists, further accumulation of foreign liabilities by USA in order to finance its current deficits has potentially serious consequences for financial market stability, especially as, at some point, holders of dollar assets might lose their appetite for further investment in USA (which helps to finance the deficit) and this could bring down the dollar. This is easily said than done. For, the dollar, in which most of the global trade is denominated and reserves are held by most countries, enjoys the status of an international reserve currency. This also explains the benign neglect of US Government to the magnitude of the deficits thus far. But, such im-

balances unchecked could also strengthen the protectionist sentiment in USA where the Congress was planning to legislate for a punitive levy on imports from China, held mainly responsible for the large American trade deficits.

Treating the problem as a "shared responsibility", IMF's policy-setting Ministerial Committee authorized the Fund in April 2006 to pursue "multilateral consultations" with the concerned Governments to address the imbalances while maintaining robust global growth. In the first such consultation, China, Japan, EU, Saudi Arabia (all surplus countries) and USA (record deficits) had agreed to participate in efforts aimed at reducing the imbalances on a collective and consensual basis. Broadly, it had been suggested for some time that the US should cut its fiscal deficits and help stimulate private savings while surplus countries should have greater exchange rate flexibility and take measures to make their economies more domestic demand-based, reducing the present level of dependence on exports. There would thus be a rebalancing of global aggregate demand. The IMF hoped to conclude the first round of consultations before the end of 2006.

Trade and Commodities

The World Trade Organisation (WTO) has projected a 7 per cent growth in volume of global merchandise exports in 2006 as against the 6 per cent in 2005, but a later World Bank estimate puts the growth at 7 per cent in 2005 and 7.6 per cent in 2006. The latter estimate takes note of a resurgence in economic growth in the European Union which should increase domestic consumption and employment. The value of exports of merchandise in 2005 crossed the 10 trillion dollar mark (10,120 billion) and that of commercial services was 2.4 trillion, the growth in value being 13 per cent for goods and 11 per cent for services. The rise in the value of

global trade in part reflects the big rise in prices of metals and fuels. Strong export growth was recorded by countries in Africa, Middle East and Central Asia, helped by the rise in oil prices.

While exports and imports growth varied among developed nations, trade performance of developing countries including India continued to be strong. China's exports was 26 per cent while India's was also around 25 per cent in 2005-06. The share of the developing countries in world merchandise trade has been rising with China becoming the world's third largest exporter and importer after USA and Germany having a share of 7.3 per cent in exports and of 6.1 per cent in imports.

A large number of countries including developed nations are increasingly dependent on the vast Chinese market which has become a global manufacturing hub which imports inputs from the Asian region and re-assembles for exports. Its growing low-cost exports include machinery, electronic products and textiles and clothing. China's two-way trade in 2005 crossed the 1.4 trillion dollar mark. In 2005-06, India's two way trade exceeded 250 billion dollars in goods and 135 billion in commercial services.

In 2004, developed economies' exports totalled 8.975 trillion dollars while those of developing countries were about three trillion dollars. Region-wise, developing Asia's exports were the largest at 2.3 trillion dollars. In 2004, China directed 59 per cent of its exports to developed economies, mainly to North America, EU and Japan, and 39.6 per cent to developing countries whereas India shipped a higher percentage of goods to other developing countries (50.2 per cent) and 47.8 per cent to developed economies like EU, USA and Japan. Manufactured exports accounted for 91 per cent of China's exports and 76 per cent of India's. US deficit in trade with China rose to 202 billion dollars in 2005.

Commodity price increases, especially metals and minerals, helped to boost export revenues of commodity exporters among developing countries.

With the sharp swing in commodity prices (oil, metals etc), many developing countries could get out of growth stagnation, such as in sub-Saharan Africa. But this cycle was not expected to last as non-fuel commodity prices were tending to moderate in 2006. Oil prices continued on an unrelenting uptrend due to rise in demand in China and India as well as in the USA coupled with volatility on fears of supply interruptions in producing countries caught in civil disorder or conflicts. World consumption of oil was 85 million barrels a day in the first half of 2006. No significant fall in oil prices is considered likely over the medium term. The World Bank estimates the average price of crude to rise to 64.2 dollars in 2006 from 53 dollars in 2005.

Capital Flows

Capital flows to the developing countries, substantially private flows, have taken the center stage in meeting their financing needs since 1990s, especially in the wake of economic liberalization by many countries, and as official development assistance flows declined as a ratio of gross national income of the aid-extending richer nations. This ratio was not even half of the UN target of 0.7 per cent of GDP, set at the beginning of 1980s. Governments and private sector of developing countries, especially emerging market economies, depend on such flows both for investment and trade financing needs. A large part of private flows is made up of foreign direct and portfolio investments channeled to several countries via the markets or through commercial banks from banks abroad. These flows have eclipsed official loans to developing countries.

from bilateral creditors and multilateral financing institutions like the World Bank. Even the relatively low share of official aid and debt has been turning increasingly negative as developing countries service past official (bilateral and multilateral) loans and there has been no increase in official financing in real terms.

On the other hand, private capital flows (by way of bonds raised in international capital markets, syndicated commercial bank lending, investment flows, direct and portfolio, and short-term debt) have been on uptrend. In 2005, net private capital flows (net debt and equity) totalled 491 billion dollars, but on official account (receipts and outgoes), there was outflow of 71.4 billion dollars by way of debt servicing, thus leading to a transfer of resources from developing to developed countries. For many poorer countries, especially in sub-Saharan Africa, which cannot easily raise capital abroad, official development financing continues to be important as private flows go only to credit-worthy and growing economies.

According to the World Bank's Global Development Finance 2006 Report, the larger private flows are driven by privatizations, mergers and acquisitions, external debt refinancing and strong investor interest in local currency bond markets in Asia and Latin America. The surge in private capital flows must also be seen in the context of a buoyant phase of world economic expansion and the robust 6.4 per cent growth of developing countries as a whole in 2005. Most of the private capital flows, however, go to a small number of middle-income countries and this is especially true of foreign direct investments which are attracted by fewer countries. China heads the list drawing 60 billion dollars a year as FDI.

In 2005, the net private capital flows of 491 billion dollars included equity flows of 299 billion dollars (FDI 237.5 and portfolio

61.4 billion) and private debt flows of 191.6 billion made up of bonds issued, bank loans and short-term debt. While official development assistance was higher at 106 billion dollars, a good part of the increase over the previous year was for debt relief for Iraq and Nigeria. Overall, for all developing countries taken together, net official flows were negligible and developing countries' debt servicing included 41 billion dollars to IMF and 31 billion dollars to others (bilateral).

Although most countries prefer, and are trying to provide a conducive policy framework for FDI, these flows have for years been uneven as they go mostly to select countries and regions. Apart from China, the largest recipient of FDI, the share of South Asia as a whole, was only 8.4 billion (India over 5 billion dollar), less than sub-Saharan Africa's 17.6 billion dollars. Total, including debt flows to South Asia was 23.6 billion, one-twentieth of global private capital flows. China has lately begun to attract FDI in service sectors (banking) besides manufacturing. Total FDI in China was 562 billion dollars by early 2006, according to official Chinese data, as against the cumulative direct investment of 45 billion and portfolio investments of 55 billion in India till December 2005 (RBI)

A large part of global FDI flows into developed nations was due to take-overs and mergers and acquisitions of firms, some of a large magnitude - like the 100 billion dollar merger of Shell and Royal Dutch (of UK and the Netherlands respectively). M and A also played a large part in FDI into China and India. Much less of FDI went for greenfield projects last year. It is also noticeable that many industrial countries are trying to tighten regulations to discourage foreign participation in areas perceived to be of strategic interest. China's state-owned oil corporation was thwarted from bidding for an American oil firm last year. There is risk that regulatory actions may sometimes exceed what is

eeded to safeguard essential interests and e motivated by protectionist notions, according to the Organisation of Economic Cooperation and Development (OECD - Paris).

The outlook for capital flows to developing countries in the current year and 2007 depend on the sustainability of current global expansion. The foreign investor appetite for emerging market assets could dissipate somewhat if home country interest rates go up. Given the soaring oil prices and the widening trade and payments imbalances among countries, there could be storms ahead, the World Bank warned in May and urged developing countries to put policies in place which would strengthen their capacity to weather external shocks. Central banks around the world were already seized of the emerging inflationary pressures from high energy prices which would necessitate further monetary tightening by raising the policy rates - a process well under way in the first half of 2006 both among advanced nations and emerging economies. Many developing countries, reeling under the impact of high oil prices, have exhausted their surpluses and other cushions and now become vulnerable to shocks.

South-South Flows:

Trade and investment cooperation has been expanding among developing countries. South-South trade had more than doubled in a decade to a total of 562 billion dollars in 2004 and at over 17 per cent growth per annum has been faster than south-north and north-south exports. This rapid growth is linked to the presence of high growth rates in several developing countries, substantial reduction in transport costs and falling transport costs. Likewise, foreign direct investment (FDI) rose from 47 billion dollars in 2003 from 14 billion in 1995. South-south financial cooperation has

also been spurred by the regional trade agreements.

Though a small share of global private flows, south-south transfers have the potential to change the face of development finance, if developing country growth continues to outpace that in developed countries over the coming two decades, the World Bank said. Even here, FDI originates from firms in countries with higher incomes and is invested mostly within the same region. Also, FDI is intended to tap resources like energy in other countries and half of China's investments abroad has gone to natural resource projects in Latin America and Africa.

Remittances

Remittances to developing countries in 2005 are estimated at 167 billion dollars by the World Bank (173 billion according to UN estimates), and these flows, says the Bank, can have significant impact in reducing poverty, facilitating increase in household consumption in education and health and supporting economic activity. At the same time, the Bank notes that the higher per capita capital flows to developing countries has helped in reducing domestic investment, leading to a rise in the countries' external debt and thereby increased in accumulation of foreign debt by private entities. It also notes that countries, which receive more remittances as a share of foreign exchange receipts

Overall, remittances have a significant potential to reduce poverty and support economic growth in developing countries. However, the Bank cautions that the current surge in remittances is largely a result of the global economic boom and is not sustainable in the long run. It also notes that the high cost of remittances, which is around 10 per cent, is a major barrier to their effectiveness in reducing poverty.

justed capital flows. Private transfers (workers remittances) to India in 2005-06 were 25.22 billion dollars as against 21.27 billion in the previous year. Such remittances have been a significant factor in keeping the current account deficit to the minimum, the other being the earnings from software exports which had risen to 23.60 billion dollars in 2005-06 from 17.20 billion the previous year.

Employment

Global economy on robust expansion for four years now has failed to deliver new jobs for those entering the work force, and with some 192 million seeking work at the end of 2005, the unemployment rate stood at 6.3 per cent without much change while developing countries bore the brunt of the problem with profound economic and social consequences, the International Labour Organisation (ILO) said in a report in June 2006.

ILO has projected that by 2015, there would be an increase of 430 million in the world labour force, over 80 per cent of it in developing world, and this would need an annual job generation of more than 43 million over the coming decade to ensure that unemployment levels do not rise further. Under globalisation, employment intensity has declined and the dignity of work has been devalued, according to Dr. Juan Somavia, Director-General of ILO. The world

labour scene is characterized by high youth unemployment, gender discrimination, hazardous occupations, child labour and lack of social protection for millions in the informal sector. Continuous large-scale shifting out of agriculture and rural areas into urban centers pushed by poverty and pulled by the hope of decent employment was adding to the enormity of the problem.

At the same time, there are growing skills shortages in developing countries as they come to terms with the inroads of technology in an increasingly competitive global environment. Technological change is threatening the job security of many working men and women who are unable to find alternative jobs. Greater efforts on skill development of workers and managers is vital to garner and share the benefits of new technologies, the report stressed.

What the ILO has reported is equally true of India as there is a growing mismatch between demand and supply of highly skilled persons for Information Technology and other professional disciplines. At current levels of absorption in IT services, India could also face a shortage unless institutions of higher education expand and turn out quality personnel in much larger numbers than at present. This assumes urgency as India is currently the leading destination for services outsourced by advanced nations, particularly the USA

The World in 1900

Population : 1.6 billion

| Life Span | Men | - Women |
|-------------|-----|---------|
| Japan | 44 | 45 |
| Italy | 44 | 45 |
| USA | 48 | 51 |
| Mexico | 32 | 34 |
| Afghanistan | 41 | 42 |

Average Working Hours
(Per week, industrial occupations)

| | | |
|-------------------------|---|------|
| U.K. | : | 52.4 |
| U.S.A. & Netherlands | : | 52.0 |
| Denmark, France & Japan | : | 51.7 |
| Germany | : | 51.6 |

EDUCATION & CAREER

PART

07

The World of Careers

B S Warriar
Career Consultant

We live in a knowledge society. The Marxian doctrine of haves and have-nots has now assumed a new dimension of information, and not of wealth in terms of money. Arriving at our best career option is possible, only if we gather as much information as possible on diverse professions and educational opportunities. We should break the shackles of prejudices such as attaching unqualified superiority for professions like medicine, engineering, and the civil services. There is tremendous diversity in the matter of careers covering conventional as well as emerging fields.

The list of possible careers is perhaps endless. A modest effort is being made here to highlight some of them that have relevance in the current national scenario with the seamless world as the backdrop. The career path of any individual has to be chosen, taking into account factors such as aptitude and learning ability of the student, financial position of the family, opportunities for higher studies, duration of the course, the gender factor, proximity of the educational institution from home, and prospects for early employment.

The treatment is indicative and not exhaustive. Any aspirant should gather further information on his favourite fields of choice.

AIRCRAFT PILOT

An aircraft pilot has a rare charm and glamour. The training is tough and expensive.

The pilot's job demands sound technical knowledge of his aircraft, ability for flawless

interpretation of the readings of sophisticated instruments, and for complex manipulations at takeoff and landing as well as in midair. Alertness, quick thinking, unambiguous communication with the ground control personnel, mental balance for facing trying moments during flights, grit, presence of mind, self confidence, and good physical fitness are necessary. Salaries and perks are attractive.

There are three progressive stages in the training of a commercial pilot: SPL, PPL and CPL (Student / Private / Commercial Pilot Licence)

Candidates who have passed 'plus two' examination with Mathematics and Physics as optional subjects and completed 16 years of age can embark on pilot's training. Flying clubs would give initial tuition. Those who have good physical fitness and a pass in the once-in-a-lifetime pilot's aptitude test will receive SPL. When you complete 17 years of age, you can sit for an objective test conducted by the Director General of Civil Aviation, New Delhi. You must have completed a total of 60 Hours of flying with 20 hours of solo including five hours cross country. Medical certificate has to be obtained from the approved authority. You secure a PPL.

CPL comes after acquiring thorough competence. Stipulated hours of flying covering solo, cross country, instrument, and night flying. Medical fitness to be certified either at the Air Force Central Medical Establishment, New Delhi, or the Institute of Aerospace Medicine, Bangalore. Passing a written examination and rigorous flying tests are vital.

tal training for three to five years would
quired to make you a commercial pilot.
he Indira Gandhi Rashtriya Uran Akademi,
Bareilly is the premier centre that offers ab
o training and has a combined programme
t covers CPL and B Sc Aviation. There are
veral authorised centres of training, with
overnment subsidies to students. List of cen-
es in the site <http://dgca.nic.in>.

ANIMATION & MULTIMEDIA

Courses in animation and multimedia of-
fer opportunities to those who are blessed
with artistic talents and imagination, and have
a passion for computer-based studies. The
programs are of short duration. Anyone with
a 'plus two' qualification can go in for this
kind of training.

Multimedia may involve a fine mixture of
text, graphics, photographs, animation,
video, sound, and interactivity, offering
boundless possibilities in effectively convey-
ing a message.

There is a convergence of art, science, lit-
erature, commerce, and industry in multime-
dia. Its application has made education and
entertainment richer. CD ROM, Internet
webs, advertisements, computer games, cin-
ema and television require those trained in
animation. Personal qualities are more impor-
tant than specific academic qualifications.

Animation could be simple in educational CD
ROM or Internet web sites. But television and
cinema are in a different mould. Advertisement
may demand products of dazzling colours and
vigorous movements. Page making, graphic
designing, digital image processing, 2D and 3D
animation, digital audio processing, and special
effects are some of the areas to be mastered.

Job opportunities are in the fields of video

ARCHITECTURE

Architecture is a happy union of art and
technology. It merges gift of imagination,
sense of aesthetics, and sharp precision.

We need architects for the competent de-
sign of dwelling houses, schools, hospitals,
shopping complexes, churches, temples, fac-
tories, and other buildings. They plan and de-
sign housing complexes, gardens, parks, thor-
oughfares, commercial centres, plazas, etc.
Town and country planners ensure optimum
utilisation of the available land. An architect
should ensure that the design matches the
environment, without sacrificing aspects such
as safety, economy, and utility. They may
have to supervise works.

Excellent skills in sketching, drawing, and
computer graphics, numerical ability and
mathematical mind, and gift of visualisation are
essential attributes. An architect should be con-
versant with the availability of materials, their
quality, durability, and cost. He should have
the temperament for long periods of office
work, and patience for revising or redoing a
work without grumbling. He may have to
make models for display and discussion before
finalising the design. He should necessarily
know the government norms, rules and regu-
lations relating to construction. Sometimes a
client may ask for a turnkey service, which calls
for liaison with contracting agencies. A good
architect may have to be an artist, a business-
man, and a manager rolled into one!

In universities conducting the 5-year
B.Arch./Bachelor of Architecture course, the
education usually starts through an entrance
test. Acquiring membership of the Royal In-
stitute of Architects, Mumbai is another way
of entry to the profession.

cesses for specific use. It makes tremendous strides perhaps faster than electronics or computer technology. It is sure to play a vital role in our life in the coming years.

The impact of biotechnology will be felt in activities including agriculture, industry, medical treatment, and environment. New species of plants, new dimensions in preventive medicine and medical treatment, pharmaceuticals, insecticides, hormones, manure, animal husbandry, cloning, transplantation of embryos, pisciculture, immunology, genetics, and many other areas will be influenced by this interdisciplinary field of study and research.

Biotechnology is closely linked to genetic engineering that involves the directed alteration of genetic material. Substances like human insulin, growth hormone and human interferon (a natural virus-fighting substance) have been produced this way. Recombinant-DNA techniques along with methods for producing monoclonal antibodies have improved medical diagnosis and oncology.

Students with diverse backgrounds can take up courses in biotechnology. A bachelor's degree may not take you very far in the profession, since this is primarily a research-oriented discipline. A genuine desire for sustained research work, persistence, and resilience to withstand temporary setbacks, and real scientific temper are essential for achieving success in this line.

There are many universities that conduct programs at different levels. Public as well as private sector organisations offer facilities for research.

BIOINFORMATICS

The nascent field of bioinformatics represents the marriage of biotechnology and information technology. It deals with computational management of all kinds of biological information. Sometimes it is referred to as *in-silico* biology indicating that it is performed on computer.

The quantity and diversity of biological information are so enormous that the data can hardly be analysed by conventional means. Sophisticated computerised techniques have become essential in processing the data. Bioinformatics uses computer software tools for database creation, data management, data warehousing, data mining, and global communication network.

The real challenge in bioinformatics is the intelligent analysis of the wealth involved in the deluge of sequence data. The information has to be interpreted for proper appreciation in terms of protein structure, function, and evolution.

Jobs opportunities would be in the areas of data mining (sorting huge amounts of unorganised biological data), gene banks, protein data banks, developing diagnostic kits, genomics (functions of genes), proteomics (functions of proteins), customizing software, etc. Those who have a genuine interest for sustained research work will find bioinformatics a fertile ground for studies and training. A mere Bachelor's Degree may not take you very far in the profession.

Proficiency in IT, biology, and mathematics is necessary for work in biotechnology. Those who come from any one of these disciplines can enter the field and master the other areas as required.

CHOREOGRAPHY

There are offbeat professions such as that of the choreographer. With the rising popularity of cinema, television, and stage shows of performing arts, there is great scope for choreography. It is the art of planning, composing, designing and arranging the steps, movements, and patterns in dances. Even subtle variations in feelings, moods, and emotions have to be reflected through expressions and movements. Group dances involving synchronous movements of several bodies have their own flavour.

Environment Protection Training and Research Institute, Hyderabad

National Information Center of Earthquake Engineering- IIT Kanpur

The process of disaster management offers opportunities to a wide variety of professionals such as an IT expert developing special software and an engineer designing an instant construction scheme. Presence of mind and mental toughness are essential for working calmly in trying circumstances.

FINANCE PROFESSIONS

Without the hassles of entrance tests or counselling sessions, you can walk into attractive professions in the finance sector. There are three options: chartered accountant, cost accountant, or company secretary. You need not attend a regular college, but undergo instruction through correspondence arranged by the concerned institute. You may, if interested, attend the oral classes organised by accredited institutions. The qualifications you acquire have a statutory status. The fees are moderate.

The training programs of the three disciplines are similar. After 'plus two', you pass a foundation test, and then intermediate and final examinations. The institute of chartered accountants has renamed the foundation and the intermediate as professional education (PE) I & II. If you are a graduate, you can skip the foundation.

CHARTERED ACCOUNTANT: After PE I & PEII and the prescribed 250-hour computer training, you should work for three years as an articled clerk with a practising chartered accountant.

Can work as an accredited accountant, authorised auditor, corporate caretaker, financial consultant, or tax specialist, or go for corporate jobs. Details: [HYPERLINK "http://www.icaai.org"](http://www.icaai.org) www.icaai.org (Enterprising youngsters may go for "CPA" - Certified Public Accountant - popular in many countries

including the US or "ACCA" - Association of Chartered Certified Accountants- prevalent in the UK and other countries.)

COST & WORKS ACCOUNTANT: Cost reduction is vital in any manufacturing industry. Computation of costs and identifying methods of cost reduction are done by cost and works accountants. They give the right prescriptions enabling the best possible management decisions.

Their functions include statutory maintenance of cost accounting records, evaluation of worth in investments, critical analysis of financial performance of organisations, internal co-ordination in industrial or commercial undertakings, budgeting, monitoring and analysis of data, and auditing. Details:<http://myicwai.com>

COMPANY SECRETARY: He is not a secretary to the CEO or MD, but a top-notch professional in the corporate sector. If you are endowed with legal aptitude, analytical skill, tact, ability to keep official secrets, and sheer will to win through hard work, this is your line.

Companies with a paid-up share capital of Rs 200 lakhs or more are statutorily required to appoint a whole time Company Secretary. If the paid-up share capital is between Rs 10 lakhs and 200 lakhs, a whole-time CS should issue a 'compliance certificate'.

The functions of a CS spread over management, finance, tax, corporate planning, and legal affairs. He should ensure statutory compliance of the company on different fronts. He is a dynamic link connecting the board of directors, shareholders, and regulatory agencies. He acts as a confidant of the Board of Directors, counsels the directors and functional heads on policies, procedures, and legal implications. He takes part in the formulation of corporate policies and programs. He discharges secretarial functions such as filing company returns with the Registrar of Companies and other authorities. A Com-

pany Secretary can be a consultant or go for private practice.

Apart from passing the Final Examination, a candidate has to undergo practical training for 15 months in a company / under a practising CS.

Details : www.icsi.edu

INFORMATION TECHNOLOGY

This is a discipline that opens the flood-gates of job opportunities to millions of our youth. The diversity of services demanded by industry is so large that one has to identify his area of operation. Conventional Bachelor's Degree in IT is not a must for a position in the field. People with different attainments have openings. India has gained substantial reputation at the global level in terms of quality rendered.

According to one definition, IT is the convergence of computer, information, intelligence, communication, Internet, and technical administration. It integrates data, equipment, personnel, and problem-solving methods in planning and controlling business activities. IT provides the means for collecting, storing, encoding, processing, analysing, transmitting, receiving, and printing text, audio, or video information.

BPO (Business Process Outsourcing) is a significant area that absorbs people with computer competence, good command of English language, and soft skills. BPO essentially involves a contract with an organisation in a developed country like the US, for providing a business process or function. This process may entail various kinds of efforts such as Accounting, Animation, Back office, Banking, Call centre operation, Chip design, Clinical research, Computer programming, Content development, Customer services, Desktop publishing, Engineering, Insurance services, Invoicing, Knowledge services, Management consultancy, Medical services, Product design, Software, Taxation, Telecommunication,

Transcription, and Travel agency services. There are several areas of work listed as IT-enabled services. Apart from thorough knowledge of the concerned domain, some of these may require attributes such as effective communication, ability to think in English, pleasing attitude towards customer service, ability to react with empathy, and telemarketing skills.

India accounts for only a very small percentage of IT global market share; but the BPO share is still less. The IT enabled services that may be considered as a component of BPO offers bright prospects of employment. Those who have acquired higher qualifications can take up work known as KPO (Knowledge Process Outsourcing) involving research and relatively higher order intellectual work that pays much more than run-of-the-mill BPO jobs. It has been estimated that KPO would grow at 46 percent to reach a staggering 17 billion US dollars by 2010, of which 12 billion would be outsourced to India. India may have more than 2.5 lakh KPO professionals by 2010. With our intellectual potential as the key factor, India could emerge as a global KPO hub.

MANAGEMENT

Effective management of resources is an essential ingredient of progress in any organisation. Competent leaders should motivate people to optimise their performance with a definite goal in view. Simple common sense and general awareness alone may not solve complex problems in modern systems. A business management curriculum may contain subjects such as cost and management accounting, operations research, quantitative techniques, data warehousing and data mining, strategic management and supply chain management.

Usually a graduate in any discipline with a minimum of 50% marks can join the stream of management studies. There would be a

written test containing subjects such as data sufficiency & interpretation, reasoning, quantitative aptitude, reading comprehension, and verbal ability. Those who perform well in the written test would be called up for group discussion and interview. Admission to any business school involves these steps. The institution from which you secure your qualification has a profound significance in finding a placement. Premier centres like the Indian Institutes of Management offer attractive placement opportunities.

There are several management admission tests:

CAT - Common Admission Test, conducted by the IIMs (Many other business schools also use CAT score for the first level selection)

XAT - Xavier Admission Test, conducted by XLRI (Xavier Labour Relations Institute), Jamshedpur

MAT - Management Aptitude Test conducted by All India Management Association, New Delhi

ATMA - AIMS Test for Management Admissions (AIMS - Association of Indian Management Schools)

JMET - Admission to IITs & IISc

GMAT - Graduate management Admission Test (Globally recognised qualification)

The usual disciplines of specialisation are Marketing, Human Resources, Finance, Operations, and Computer Systems. There are however certain institutes or programs that specialise in specific areas, such as Rural / Plantation / Forest / Textile / Agri-business / Software Enterprise / Bank / Power / Retail / Hotel / Hospital Management, and Foreign Trade / International Business.

NANOTECHNOLOGY

This is a discipline that offers results that remind you of speculative science fiction. Would you believe that by manipulating matter at the atomic scale, materials up to

100 times stronger than steel, at a fraction of its weight, can be made? It makes most products lighter, stronger, cleaner, less expensive and more precise. Experts say that atoms in sand can be rearranged with addition of other elements to make computer chips. If we rearrange the atoms in dirt, water and air we can make potatoes. Patients may drink medicinal fluids containing nano-robots programmed to attack and reconstruct the molecular structure of cancer cells and viruses to make them harmless.

Nano is Greek for dwarf. 'Nano' in scientific parlance means one billionth. Nanotechnology is the science of the small. It studies the structure and behaviour of materials at atomic or molecular level.

Nano-robots could also be programmed to perform delicate surgeries. They can operate seamlessly without leaving the scars that conventional surgery does. Molecular computers could contain storage devices capable of storing trillions of bytes of information in a structure the size of a sugar cube.

Nanotechnology is expected to usher in the next industrial revolution. It will have wide applications in biotechnology, and in pharmaceutical, medical, agriculture, food and beverage, and environmental industries. From these descriptions it is obvious that it is a research-oriented discipline. Those from diverse science streams can seek entry to the field. National research organisations and certain universities offer facilities for research.

NURSING

Nursing is the face of compassion in the field of healing and medical service. Indian nurses have made tremendous reputation at the global level. There are great opportunities at the national as well as international levels. After 'plus two' with biology, chemistry, and physics as the optional subjects, you can undergo the 4-year B Sc or the 3-year General Nursing and Midwifery program,

two technologies of numerical control and teleoperation.

Limited facilities can be found in institutions such as the IITs for research-oriented work in this discipline, mostly as part of PG programmes. BITS Pilani, Indian Institute of Science Bangalore, and Manipal Institute of technology also have facilities.

SCIENCE & HUMANITIES

We are not trying to combine two opposites. In the mad rush for engineering and medicine, students and parents often forget options such as Dentistry, Veterinary Science, Forestry, Fisheries, Agriculture, Ayurveda, Homeopathy, , Pharmacy, Law, Fine Arts, Fashion Design, Acting, Music, Modelling, Teaching, Travel & Tourism, Journalism, Advertising, Public Relations, Foreign Languages, Design, Merchant Navy, Physical Education, Food Technology, Physiotherapy, Occupational Therapy, Special Education (teaching the handicapped), Spatial Design, Film & TV, Photography, Library Science, Food & Nutrition, Cosmetology, Criminology, Jewellery Design, Gemmology, and Defence Services. Each one of these offers opportunities to the right persons.

Mathematicians have before them areas such as operations research, programming, design of computer systems, and actuarial science. Statisticians play a vital role in national planning. Those who take up physics have ample opportunities in research in areas such as Astrophysics, Geophysics, Nuclear Physics, Astronomy, Meteorology, and Electronics. Chemistry is a discipline of its own charms, spreading its tentacles to fertiliser, pharmaceutical, metal, oil, soap, paper, polymer, textile, fuel, food, plastics, paint, varnish, and pesticide industries. Research in different branches such as organic, inorganic, physical, analytical, electro, radio, histo,

geo, bio – chemistry offer interesting challenges.

Certain professions are the preserves of those who have specialised in history, whereas some others show preference to graduates or post-graduates in history. Archaeology, museology, numismatics, epigraphy, and archives are examples.

Economists have openings in business journals, banking industry, planning cells, etc. where economic analysis is required. The Indian Economic Service recruits competent economists through UPSC examination.

Those who take up psychology have wide options as experimental / educational / industrial / clinical psychologists, counsellors, psychometrists (experts in determining aptitude, intelligence, etc.).

Commitment to social work can find expression in an effective manner, if we get ourselves trained in subjects such as sociology, social work, and psychology. Social work has different faces like community / medical / gerontological / correctional social work, baby care, childcare, and family welfare.

Learning languages has its own charms. Proficiency in foreign languages like French, German, Russian, Japanese, Spanish, Italian, Chinese, and Arabic will open opportunities to work as specialists in the diplomatic service, interpreters, translators, and tourist guides,

Graduates in any discipline after a course in journalism and communication can join the challenging career covering print and electronic media. Advertising and Public Relations are two disciplines close to journalism.

Law, fashion design, film and TV, management, teaching, special education, library & information science, and sports coaching, are some of the areas open to university graduates in any subject, but gifted with the appropriate aptitude. Graduates with poise and skills can contemplate the job of an airhostess / flight purser.

English and Subject Proficiency Examinations for Entry into Universities Abroad

Nirmala Krishnaswamy, Chennai

With the demand for personnel in various fields ever on the increase in the United States and in many other countries abroad, there are vast opportunities available for Indians, both for academic pursuits and for taking up jobs in different parts of the world.

However, whether it is to seek greener pastures or to improve one's academic credentials one may have to appear for one or more of the following examinations. These are:

1. TOEFL : Test of English as a Foreign Language conducted by ETS (Educational Testing Service).
2. SAT : Scholastic Aptitude Test
3. GRE : Graduate Record Examinations
4. GMAT : Graduate Management Admissions Test
5. IELTS : International English Language Testing System

TOEFL:

The Test of English as a Foreign Language (TOEFL) determines the ability of non-native speakers of English "to use and understand English as it is spoken, written and heard in college and university settings."

This test is offered in different formats depending on where the test-taker is located. Non-native speakers at the 11th grade level or above should take the TOEFL test as a pre-requisite for admission into undergraduate courses in colleges and universities where English is used or required.

The Test consists of the following areas:

- a. Listening, Reading Sections:

Listening passages simulate college lectures and follow 'natural' speech patterns, including pauses, corrections and errors in grammar.

Reading passages, on the other hand, are more academic in nature so that they are closer to college reading assignments. Students have access to a glossary.

- b. Structure Section:

Grammar skills are tested across all areas

- c. Writing Section:

There are two essays: One 30-minute and one 20-minute essay.

- d. Speaking Section:

Six open-ended speaking questions require test takers to speak into a microphone. In September 2005, Educational Testing Service (ETS) introduced a new TOEFL internet-based test (iBT). This new TOEFL test is administered by using the internet. This allows the ETS to capture spoken and written responses in a standardized manner. This test is expected to be introduced all over the world this year. A complete information is available at www.ets.org/toefl or www.ets.org/toefl. List of cities where TOEFL iBT is administered is posted in the last part of the book. In addition of this, there are many TOEFL preparation books every year. It is better to choose a book accessible TOEFL iBT test. There are many TOEFL preparation books available. It is better to choose a book accessible TOEFL iBT test. There are many TOEFL preparation books available. It is better to choose a book accessible TOEFL iBT test.

TOEFL iBT

TOEFL iBT

reports by phone, fax, or mail and have them sent to institutions that he did not identify when he registered to test. Credit cards are required for phone and fax orders.

To order by phone, candidates must call 1-609-771-7714. For this, the following details are required: the 7-digit registration number printed on the admission ticket (PBT) or the 16-digit appointment confirmation number (CBT), test date and date of birth.

A valid credit card (international)

A four-digit institution code (PDF) and two -digit department code (PDF) for each score report that is requested.

To order by fax or mail, the TOEFL CBT/PBT Score Report Request Form (PDF) along with all credit card information is to be completed and faxed to 609-771-7500.

To order by mail the Score Report Request Form must be completed and mailed with payment to

ETS-TOEFL iBT

P.O. Box 6153

Princeton, NJ 08541-6153 U.S.A.

The iBT measures the candidate's familiarity with English as a communication tool in every day situations. The Computer Based Test (CBT) tests the candidate's proficiency in individual language areas such as *grammar, usage and vocabulary* and the scores obtained in each of these is used to arrive at the candidate's overall proficiency level in language. Instead of measuring the candidate's grammar proficiency through questions based on structures, the iBT tests the candidate's control over grammar directly by assessing the candidate's grammatical structures from the way he employs them in his essays.

TOEFL - CBT (Computer Based Test)

TOEFL - CBT has 4 sections

a. Listening: In this section the candidate listens to short and long conversations, lectures and class room discussions. The ques-

tions answered give an insight into the candidate's ability to identify facts and options that are part of the listening passages. There are 30 to 50 questions and the time-limit is 40-60 minutes.

b. Structure: There are 20 to 25 questions to be answered in 15 to 20 minutes. This section tests the candidate's command over basic English grammar rules. The questions are in the form of

i. sentence completion and

ii. error identification

c. Reading: There are four to five passages. The questions number between 30 and 50. The time allotted is 40 to 60 minutes. Passages cover topics which a school student should be familiar with.

d. Writing: Here a candidate is required to write an essay on a general topic. The candidate has half an hour within which he composes his essay.

TOEFL iBT (Internet Based Test)

a. Listening: There are two conversations between two people, two lectures including some student comments and two other lectures which do not have student comments. There are five questions based on each of the conversations and six on each of the four lectures.

While the conversations could be between a professor and a student or between a student and a librarian lasting two to three minutes each, the lectures could be on a whole range of subjects.

The questions test candidates on what they understand from the speakers, ideas, what the implications are and whether they are able to draw inferences, whether they can locate the main theme in a lecture and whether they are able to identify details, understand idioms, summarise main points and perceive the speaker's tone and attitude.

b. Speaking: This section tests the candidate's ability:

i. to speak cogently on topics in an academic setting;

ii. to participate in a discussion

The candidate's responses are recorded. Preparation time is given. There are six tests of which two are independent and four are integrated.

For the independent tasks: a candidate's response time is 45 secs which comes after a 15-second preparation time for the first one and for the second, a candidate has to give his opinion and also the reason(s) behind it.

For the integrated tasks: a candidate has to read, listen to an one-minute conversation on what is printed and then summarise what he has heard. The voice is taped. The response has to last 45 seconds after a 30 second preparation time.

Tasks 4,5 and 6 are all related to listening and then summarizing. The tasks get progressively more and more challenging.

c. Writing: The part of the TOEFL exam consists of two tasks, one of which is an independent task and the other an integrated one. The former is allotted 30 minutes to complete and the latter: 20 minutes.

The iBT gives a better picture of the candidate than what one can get on the CBT. The Writing section is new in concept and the speaking section too is quite different. Various language skills are tested and the preparation has to be systematic, and nothing short of a concerted effort would give the desired result.

The TOEFL test can be taken only once per calendar month and at present costs U.S. \$ 140 per test.

SAT Scholastic Aptitude Test

The SAT examination is for those who wish to pursue an undergraduate course in the U.S. Some universities require both the TOEFL and the SAT scores.

This test consists of a

a. math section

b. critical reading section and

c. writing section

SAT math section:

This part of the test consists of

i. Two 25-minute sections and one 20-minute section

ii. 44 multiple-choice and 10 grid-ins and

iii. is worth 200 to 800 points

Questions on algebra are included and although there are some questions on triangles, trigonometry is not required to solve them. The other topics a candidate should be comfortable with are:

Sets, absolute value, radical equations, exponents and functions.

The Math Section essentially consists of problem-solving, questions on topics a candidate is expected to have learnt at school, including geometry, algebra and arithmetic.

SAT Critical Reading Section

This section tests the candidate's reading comprehension skills.

The test consists of:

i. Two 25-minute sections and one 20-minute section

ii. 48 reading comprehension questions

iii. 19 sentence completions questions

The test is recorded on a 200 to 800 point scale

In the Passage-Based Reading, candidates are asked to read short and long passages followed by some multiple-choice questions.

In the Sentence Completion question, the candidate are presented with incomplete sentences and are asked to finish them with the correct word or words.

SAT Writing Section

This section consists of

i. 49 multiple-choice questions and

ii. an essay

25 minutes is to be spent on the essay.

The test is worth 200 to 800 points.

The Essay:

The Essay will require students to read an 80-word subject prompt that makes a statement or claim. Candidates need to take a stand in their essays and support it with examples from their own experience. The essay does not test the candidate's writing ability as much as it does other skills, such as: organization, idea development or backing an argument.

Identifying Sentence Errors:

There are 18 Error identification questions. A sentence may or may not have an error in it.

Improving Sentences:

25 sentences are given and these are to be improved without changing the meaning of the original sentences.

Improving Paragraphs:

There are six of these. Much like improving sentences, paragraphs are required to be improved, but again, without changing the original meaning intended.

GRE-Graduate Record Examinations:

The GRE General Test "measures critical thinking, analytical writing, verbal reasoning and quantitative reasoning skills that have been acquired over a long period of time and that are not related to any specific field of study".

The GRE subject Tests assess undergraduate achievement in eight specific fields of study.

These are: 1. Biochemistry, Cell and Molecular Biology

2. Biology

3. Chemistry

4. Computer Science

5. Literature in English

6. Mathematics

7. Physics

8. Psychology

Prospective graduate applicants are the ones who sometimes take the Subject Tests.

Some Subject Tests yield sub scores that

can indicate the strengths and weaknesses of individual.

Student's preparation and this is useful for placement purposes.

The Subject Tests are given at paper-based centers worldwide three times a year in November, December and April.

If a prospective candidate is planning to take the GRE in fall 2007 (Sept/Oct) or later, it is to be noted that the test format and delivery will be dramatically different from the current one.

A comparative table is given below indicating the differences between the Current GRE and the new GRE.

Test development, design and field testing will continue for the new GRE test and the finer details ought to be available at a later date.

GMAT-Graduate Management Admissions Test

This is a 4-hour computer adaptive test. The candidate's performance on previous questions will determine which questions come next.

The GMAT exam is taken by applicants keen on joining a business school in the U.S. While it is true that most schools require applicants to have a minimum amount of work experience, the minimum is usually two years. However, more important than the length of experience is the quality of work experience—where a candidate worked, what his level of responsibility was and how he progressed through the ranks. GMAT tests the candidate's basic quantitative and verbal abilities and contains no business principles at all (except as a basis for problem solving or as reading comprehension passages).

Questions at the beginning of each section have a greater impact on the candidate's score than do those which come later in the section.

GMAT is one of the costliest exams – U.S.

\$ 250/-. It now appears that a few of the business schools in the U.S. (such as Stanford Graduate School of Business) have decided that because of such prohibitive costs which may scare off some of the potentially brightest of candidates from B-Schools, they would allow applicants to submit scores from the GRE in place of scores from the GMAT

"In recent years many B-Schools have stated waiving the GMAT requirements for applicants to executive MBA programmes." GRE applications starting from July 2006, is to be U.S. \$ 160/- in India.

IELTS-International English Language Testing System

This is an exam jointly managed by the University of Cambridge ESOL Examination (Cambridge ESOL), British Council and IDP (International Development Programme).

IELTS, Australia: IELTS assesses all four language skills: listening, reading, writing and speaking, conforming to the highest international standards of language assessment.

IELTS is recognized by universities and employers in a large number of countries including Australia, Canada, New Zealand, the U.K. and the U.S.A.

Anyone who is about to finish schooling and is above the age of 16 can sit for this

exam. People with higher educational level and/or experience can also attempt the test. Students planning on higher studies abroad, professionals, job seekers, research scholars and just about anyone connected with academic work can appear for the test.

There are four modules to the test covering all four aspects of a language: reading, writing, listening and speaking. The first three are taken in a single session with no breaks in between the rests. The speaking module alone may be taken on a day decided upon by the centre, but usually on a day very close to the other three modules. In the table given below, some details of the exam are given:

Modules Time Taken Some details of questions

Evaluation is on a 0-9 band scale, 9 being the highest a candidate can get. Results are made known within a fortnight from the actual date of the exam.

Unlike the rule in the past which required a 90-day gap between two test dates for anyone wanting to repeat the test, a candidate can now retake the test whenever he/she wants.

The tests are conducted at least twice a month and in peak seasons the frequency is increased.

For more details contact: ieltsindia.com

NO. 1

The new TOEFL iBT follows the format given below:

| Section | Timing | No. of questions | Score Scale |
|--------------------------------|------------------|----------------------------------------------------|-------------|
| 1. Reading | 60 to 100 mts. | 36 to 60
(including time taken to read) | 0 - 30 |
| 2. Listening | 60 to 90 mts. | 34
(including time taken to listen to passages) | 0 - 30 |
| 3. Speaking | About 20 minutes | 6 tasks | 0-30 |
| 4. Writing | 50 minutes | 2 tasks | 0 - 30 |
| Total Time Taken: About 4 hrs. | | Overall Score Scale | 0 - 120 |

The current GRE is valid till the summer of 2007 only.

| | Current GRE | New GRE |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Test format | Computer adaptive: the computer adapts to test-taker's performance | Computer-based linear exam: every test-taker receives the exam if taken on the same day. |
| 2. Duration | 2½ hours | 4+ hours |
| 3. Test dates/
Frequency | most weekdays and week-ends, all through the year | Approximately 30 fixed-dates per year |
| 4. Method of Scoring | Verbal Score-200 to 800 points
Quantative Score-200 to 800 points
Analytical writing Assessment-0 to 6 points | Verbal Score - 110 to 150 points
Quantative Score-110 to 150 points
Analytical writing Assessment-0 to 6 points |
| 5. Test Content | <p>a. Analytical Writing:
2 essays: One 30-minute argument Essay and one 45-minute issue essay</p> <p>b. Quantitative:
28 multiple-choice questions

One 45-minute section</p> <p>c. Verbal:
30 multiple-choice questions
One 30-minute section includes analogy and antonym questions</p> | <p>a. Analytical Writing:
2 essays-30 minutes each for the argument and issue based essays</p> <p>b. Quantitative:
two 40 minute sections*
- Quantative reasoning skills tested more thoroughly
- fewer geometry, questions
- more 'real-life' and data interpretation questions
- new question formats
- new on-screen calculator</p> <p>c. Verbal
two 40-minute sections*
- analogy and antonym questions eliminated
- will include more critical reading passages
- new question formats.</p> |

* one section may be experimental

No. 3

GMAT at a Glance

| | |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Length of test | 4 hours |
| 2. When offered | Most week-days, year round |
| 3. How to register | WWW.MBA.com |
| 4. Test areas: | <p>a. Analytical Writing Assessment:
2 essay questions - 30 minutes per essay</p> <p>b. Quantitative:
37 multiple-choice questions - 75 minutes</p> <p>c. Verbal Section:
41 multiple-choice questions
75 minutes</p> |

| Modules | Time taken | some details of questions |
|-----------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Listening | 30 min. | 40 questions spread over 4 sections |
| Reading | 60 min. | 2,000-2,750 words covering two or three passages |
| Writing | 60 min. | Two tasks are given Time spent: 20 min. for task 1 and 40 min. for task 2 |
| Speaking | 11-14 min. | Candidate has to speak on general topics as answers to questions.
More like a personal interview. Has also to speak for a minute or two on a given topic. Preparation time, one minute. |

ANY SHORTCUTS TO LEARNING ENGLISH?

Nirmala Krishnaswamy, Chennai

The world had it coming for a long time. Most countries woke up to the fact, but while we in India had the 'advantage' of having had a head start in the mastering of English, a lot of the opportunities provided for the young were frittered away if only because of our obfuscated policies of language-learning in general, and English in particular. When exposed to two or even three languages in the first few years of schooling, if taught efficiently, a child learns all of it effortlessly. In the absence of this ideal, inefficiency in language-learning creeps in not only in the learning of English but in that of all other languages as well. This negativity is reinforced even later when it's time to concentrate on the maths-physics-chemistry-biology syndrome and every student is strait jacketed into the science mode, and most students, and more so the parents, bend over backwards to somehow get a seat in an engineering medical college. Students too play along and at the end of eight to ten semesters and therefore a few years, several arrears later, an average engineering graduate is found working in English. Even

students are labeled as 'bilingual people' by the recruiters and one very important reason for this is found to be a far less than satisfactory competence in the oral communicative ability of the graduates.

It is at this point that along with the articulate, competent student a large number of the less than proficient, call themselves for a variety of classes - my training course, for that matter - in order to enhance their command over English. It is a matter both for the teacher and the taught to make you make up in three to four sessions what was left undone for months and even years. It is, therefore, not surprising that in these classes to ask the student, "How do I improve my English?"

How or to what extent the student's answer is not lost. But the question is, how long does it take to get a student who can be confident?

Reading, writing, listening and speaking, these are the four skills that are essential for a student to be confident in his English. But the question is, how long does it take to get a student who can be confident?

question asked is what can one read? Time being in short supply, one has to be practical. The following observations made may be of use to those who realize they have a potential to do better and all they lack is a guiding force and fillip to their attempts.

Read newspaper editorials every single day. There are three very good reasons why this is of great benefit.

First, the English is as it ought to be written.

Second, you, as a reader, are exposed to quite a few opinions, facts and figures. It is only when you are exposed to other people's ideas that you can form your own. An editorial certainly expresses some strong opinions.

Keep asking yourself constantly whether or not you agree with the editor. If you do, why do you think you feel the same way, and if not, why not? This way it fine tunes your own opinions. Third, there are lots of vocabulary items, words and phrases, which you can learn painlessly. These will slowly become part of your active vocabulary.

(A word of caution, though. There are newspapers and newspapers. Make sure you choose a newspaper of some standing and preferably one which is fairly balanced in its views).

Talking about vocabulary, do you learn words individually? One common query is: "Can we learn about ten words a day by choosing them from the dictionary?" This is a formula for disaster. A sound piece of advice would be not to learn words in isolation. Learn them always as collections. A collection is the 'habitual placing of a particular word, next to another word or words, or a group of words so placed. 'Collocation' itself is formed from the Latin 'collocare' which means 'placed together'.

An example will make it amply clear. Let us take the word 'avail' – one of the most ill-treated words. These days discounts being offered (genuine or otherwise) at the drop of

a hat, there are banners and advertisements put out which say 'avail 5% or 10% discount'. 'Avail' in this context ought to be used as 'avail oneself of something'. So, it is: Avail yourself of a 5% discount. However, 'avail' can also be used in the following manner 'I tried very hard but to no avail (always used with a negative connotation).

Meeting new words is like being introduced to a stranger in a gathering. If you must know more about the person, a lot of effort, along with a certain amount of healthy curiosity, is required on your part.

How do we familiarize ourselves with a new word?

a. See how it is spelt.

b. Check out its pronunciation. Even common enough words such as 'draught' or 'honour' and 'honest' are mispronounced by many educated people.

c. Find out what its part of speech is. The context will help you.

d. Ask yourself if it can be converted to other parts of speech.

For eg: The word 'flop' has three meanings and can be used both as a noun and as a verb. As a verb, the meaning could be

1. hang or swing loosely
2. sit or lie down heavily and clumsily
3. fail totally (informal)

As a noun,

1. a heavy and clumsy fall
2. a total failure

'Floppy' is an adjective with 'floppier' and 'floppiest' being the comparative and superlative degree forms. It means: tending to fall, not firm or rigid. It can be used as a noun too (plural, floppies): flexible removable magnetic disk used for storing data. The adverbial form of the word is 'floppily' and 'floppiness' is another noun form. This is an exercise that a word should be put through so that, more than anything else, it has a better chance of sticking in the mind. It is

like locating a place on a map. Memory recall gets stronger.

In all probability, a new word that you have made a mental note of, will reappear in your reading. Note the contexts in which the word is used. Reading is only a part of the exercise. You have to listen to how the language is spoken. Listen to BBC or the VOA as often as you can manage. Be choosy about the programmes (such as discussions or interviews) that you hear on television (Some are excellent examples of how not to speak!).

Maintain a notebook or a file with individual pages dedicated to 'specialist' words such as those ending in -cide, mania and -phobia (for eg. Matricide, genocide, agoraphobia, dipsomania, acrophobia), specialist doctors, subject names and so on. It would be a good idea to have synonyms grouped together. For instance, you might

have a list such as commotion, hubbub, confusion, chaos, melee, pandemonium, mayhem, tumult, bedlam, anarchy - put down in the order of severity.

Phrasal verbs (verb + preposition and/or adverbial particle combination) are an integral part of the language and you have to be confident of their usage. Indians, as a whole, often use prepositions where there is no need for one (eg. Cope up; We cope with problems and not 'cope up' with them).

Word order is another important area which would need your attention. All of this is possible with strict discipline in study, dedication and sincerity of purpose.

Reading, by far, is your best teacher. That, and a confidence in yourself is perhaps the best formula for considerable success in your attempt to get a better command over the language.

Errors in the Use of English

Jagan Nath, New Delhi

The principal of a post-graduate college in New Delhi once asked me: "Is Mr. Harish your cousin brother?" I was aghast at her question. Since I had been very friendly and frank with her, I told her to say only cousin. She accepted my advice gracefully. I wondered when a learned person can commit such an error, what about ordinary humans and students?

Students must be told to avoid such an error. Try always to chop off the dead wood. Never say new recruit, say only recruit. Don't use the expression "past history". Only "history" will do. History is collection of past events. And avoid saying "final conclusion", say only "conclusion".

In the following examples, the words in inverted commas should be omitted; 'advanced' prediction, 'fatal' killing, 'definitely' decided, 'the other' alternative, for 'a period of' two weeks, 'dead' body.

Clear Writing

According to the Asian Reporter, a manual on reporting techniques, published in Manila, Philippines, clear writing does not come about by chance. It is the result of clear thinking. The words the reader is familiar with and you can prove the chances of your getting across. The familiar words can be forceful. Your writing will follow you easier if you give than... words. Here is a list of com-

| Complex | Common |
|-------------|--------|
| monumental | big |
| terminate | end |
| witness | see |
| purchase | buy |
| utilise | use |
| majority | most |
| reside | live |
| procure | get |
| proceed | go |
| contribute | give |
| request | ask |
| endeavour | try |
| summon | call |
| category | class |
| prevaricate | lie |
| incarcerate | jail |
| inaugurate | start |
| facilitate | help |
| inundate | flood |

No to deadwood

Omit verbal deadwood, says the Reporter. There is no reason to call a spade "a long-handled Instrument for turning earth in a garden". Here are some examples of verbal deadwood:

| | |
|-----------------------------|-----------------|
| Instead of | use these words |
| for the reason that | because |
| at the present time | now |
| tendered his resignation | resigned |
| affixed his signature | signed |
| told his listeners | said |
| united in holy matrimony | married |
| used for fuel purposes | fuelled |
| held a conference | met |
| in the immediate vicinity | near |
| was able to make his escape | escaped |

In fact, incompetent teachers and some private coaching institutions are responsible for the present state of affairs. Sample a printed handbill tucked away in morning newspapers, courtesy of the hawk: "You feel weak in English? You don't know how to

give answer to a question or write a simple application/paragraph or draft a letter? You have a poor vocabulary? The remedy suggested is: 'Improve your weakness' under the guidance of our highly qualified, experienced teaching staff."

There has been a mushroom growth of coaching schools which claim to develop your writing and speaking skills. These "shops" sell "spurious" goods. How many of these schools have the necessary scholarly atmosphere and how many have well-qualified staff? Sample a board outside one such study shop; "Tutions offered to students from Class Vth to Class Xth. Contact Principal between 10 to 11 a.m."

Now these few words contain howlers. The common man and even class X or XII students are ignorant of the correct spelling of "tuition". The word is even mis-spelt by teachers of English in public schools. And with Roman expressions "th" is never used. Say only Class V and X. If you want to use "th" it should be 5th, or 10th.

Howlers galore

I recall a meeting I had recently with a gentleman who claimed to be a first-class M.A. in English with 65 percent marks. This was the shock of my life. For, a first-class in M.A. English is rare, and 65 per cent is incredible. If at all a first class M.A. in English is produced once in a blue moon by a good university, the candidate will have only 60 per cent marks. He told me he was doing Ph.D. and promised to write to me when he went home in Jabalpur, Madhya Pradesh.

As promised, he wrote. There were four mistakes in his hand-written letter. The first sentence contained incorrect spelling of the word "received". He wrote "recieved". He also enclosed his resume, which was horrible. At the top it was written bio-data. Now bio-data is Indian English. No Englishman will ever use this expression. They say resume or CV (cur-

riculum vitae). In the resume, he freely used the words Class Xth and Class XIIth. I edited the resume, and sent it back to him. I wrote to him that writing Xth was a silly mistake which should be avoided. Within three weeks, he sent me a revised copy of the resume, and Class Xth and Class XII were used. He enclosed the university marks sheet which also used Xth and XIIth.

The common mistake committed today is: visitors can see the Principal between 9 to 10 a.m. When the word "between" is used, we should say between 9 and 10 a.m. Or visitors can see the Principal from 9 to 10 a.m.

Scholars, newspapers and prestigious magazines say "comprise of". Which is wrong. We can say: this book consists of 100 pages, this book comprises 100 pages. Never use "of" with comprise.

Mrs and Ms

Never use, or misuse, the word "Mrs". It's wrong to say Mrs. Lila Wati, Mrs. Shakuntla Devi or Mrs. Srilatha. "Mrs" is used with the name of a woman's husband. For instance, we can say Mrs. Gita Sehgal, Mrs. Sehgal but we cannot say Mrs. Gita. In a public school which I visited a number of times, this announcement was often heard: Mrs. Kusum is requested to go to class IV, and Mrs. Kiran is assigned to class X in the next period. A visitor from the West can be hoodwinked when she sees the board saying Mrs. Lila Wati, Mrs. Shakuntla Devi or Mrs. Srilatha. She will think that Wati, Devi and Srilatha are the names of the women's husbands. When N.T. Rama Rao, film star-turned Chief Minister of Andhra Pradesh, passed away, most of the newspapers referred to his wife as Mrs. Lakshmi Parvathi. It should have been Ms. Lakshmi Parvathi. The word "Ms" can be used with both married and unmarried women. The pronunciation is "Mizz".

"Dr. (Mrs) Usha Malhotra". We generally see board notices like...

my English boss laughed at it. She described it as Indian English. She explained that in England the patients never bother to think of the marital status of a doctor. They are concerned with the skill and talent of the doctor.

Another common error witnessed today is 'appartment' instead of "apartment" to describe a block of flats. It should be apartments.

Unfortunately, the standard of English in schools is pathetic. Not to speak of government schools, where English teaching begins from class V, even public schools, where English is taught right from Nursery and KG, suffer from this malady. Students right up to the senior secondary level lack the basic rules of the English language. One is surprised to see senior students writing: "three battles were righted in Panipat" and "three birds were caught by the hunter". Such students are penalised when they take the Board examination. What is the remedy?

The students have not learnt the three forms of the verb and adjective. Even ordinary singular-plurals are not known to them. They write "childrens" and "sheeps". Some of them do not even know the difference between "there" and "their", "it's and its", "lose and loose", "advice and advise", "practice and practise".

Basic grammar

A senior English teacher explained: "The students refuse to go back to classes V or VI grammar books to learn the three forms of verb. They consider it below their dignity to consult a junior book".

Indeed, the student today is looking for a shortcut to success. He does not bother about the fundamentals. His only aim is to score pass marks, gra... As a result, senior write even a si

I recall a meeting with a teacher, who had been working in a missionary school and taught junior classes all subjects. We met every morning at the bus stop. She had to change two buses to reach her school. She was in search of a job near home.

One day she visited my home. She told me that she had applied for the post of an English teacher advertised by a public school nearby. She knew that the Principal of the school was a friend of mine. She wanted my help.

I said to her: "To be very frank, we have met only at the bus stop. I don't know where you stand. For my satisfaction, if you could just write a simple leave application to the Principal, that would do. Please pardon me for asking you such a simple question".

When she wrote the application, it was horrible. She deserved zero out of 10. I told her there was no need to be disillusioned. "I would send you to an experienced teacher to brush up your knowledge till the interview and you will find yourself full of confidence". Neither she went to my friend nor appeared for the interview.

The English language has taken a long time to march from Chaucer to H.G. Wells, Bernard Shaw and nearer home Gandhi, Nehru, R.K. Narayan, etc. Some of them, particularly Gandhi and Nehru, wrote in their own style, lengthy sentences using bombastic words.

Indian Newspapers

Newspapers in India are fond of presenting articles or news items containing lengthy sentences. A long sentence is not easily understood and is sometimes confusing. On the other hand, pick up any English newspaper published in England or the USA, you will find short sentences and short paragraphs in simple language. They believe that simple words set in a smooth sentence. We enjoy this language for its beauty and clarity.

A senior journalist stressed the need of using a simple and familiar language while writing. He said: "News is for the general reader, who can be anyone from the village barber to the town Mayor. It must, therefore, be told in a language that is simple, forthright but decent and familiar. One must write to express, not impress."

Drawing with words

Writing is just drawing with words. A writer should be able to put in the reader's mind a reproduction of the picture he sees in his own. To be able to do that, he must use specific and concrete words. He should be positive while writing. Don't say he did not win, only say he lost. Never say did not succeed/was not successful, say only failed. Instead of "did not pay attention to", say "ignored". "Did not accept" should be "rejected". The shorter an expression, the clearer it is.

Avoid using idioms, which are expressions peculiar to a language. They are derived from native experience. Idioms will, therefore, spoil English for non-natives like us. They emphasise their foreignness and diminish their universal appeal. Let's take our English straight without using such expressions as the "apple of one's eye" or "he has money to burn" or "he lost face". Respectively we can say "favourite, rich and shamed".

Whatever the standard of English in Indian schools, colleges, and civil services, the lure of the language still persists. As a lover of English remarks, "Though British imperialism ended more than five decades ago, British linguistic imperialism still continues without a murmur of protest by patriotic Indians".

P.S.: Candidates for the post of an English teacher in a public school in New Delhi, in a written test, were asked to change the gender of ram. Six of them wrote: "Sita"! ■

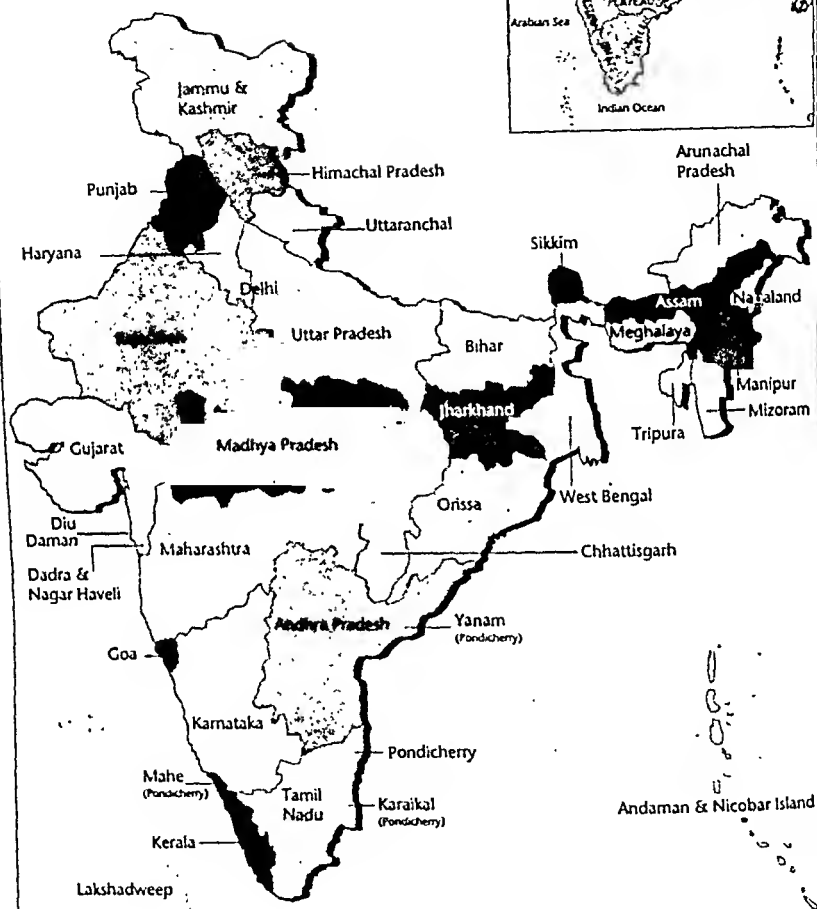
INDIA

PART

08

INDIA

States and Union Territories



Note: The boundaries of India are neither accurate nor true to scale.

The Country

India is located between 8°4' and 37°6' north latitude and 68°7' and 97°25' east longitude. India measures 3214 km from north to south and 2933 km from east to west with a total land area of 3,287,263 sq. km. India is the 7th largest country in the world. It has a land frontier of 15,200 km and a coastline of 7516.5 km. Andaman and Nicobar islands in the Bay of Bengal and Lakshadweep in the Arabian Sea are parts of India. The country shares its political borders with Pakistan and Afghanistan on the west and Bangladesh and Burma on the east. The northern boundary is made up of the China, Nepal and Bhutan. India is separated from Sri Lanka by a narrow channel of sea formed by the Palk Strait and the Gulf of Mannar.

Physical Regions

The mainland, in geographical terms is broadly divided into a) the great mountains, b) the river plains, c) the desert and d) the peninsula.

Mountain Ranges

The mountains extends for more than 2400 km. They are seven.

1. the Himalayas,
2. the Patkai and other ranges bordering India in the north and north east,
3. the Vindhya, which separate the Indo-Gangetic plain from the Deccan Plateau,
4. the Satpura
5. the Aravalli
6. the Sahyadri, which covers the eastern fringe of the West Coast plains and
7. the Eastern Ghats, irregularly scattered on the East Coast and forming the boundary of the East Coast plains.

Important Mountain Peaks: Height in meter above Mean Sea Level:

| | |
|----------------------------------|-------|
| (1) K2* | 8,611 |
| (2) Kanchenjunga | 8,598 |
| (3) Nanga Parbat | 8,126 |
| (4) Gasher Brum* | 8,068 |
| (5) Broad Peak* | 8,047 |
| (6) Disteghil Sar* | 7,885 |
| (7) Masher Brum E | 7,821 |
| (8) Nanda Devi | 7,817 |
| (9) Masher Brum W* | 7,806 |
| (10) Rakaposhi* | 7,788 |
| (11) Kamet | 7,756 |
| (12) Saser Kangri | 7,672 |
| (13) Skyang Kangri* | 7,544 |
| (14) Sia Kangri* | 7,422 |
| (15) Chaukhamba (Badrinath Peak) | 7,138 |
| (16) Trisul West | 7,138 |
| (17) Nunkun | 7,135 |
| (18) Pauhunri | 7,125 |
| (19) Kangto | 7,090 |
| (20) Dunagiri | 7,066 |

*in Pak-occupied territory

Watersheds

There are mainly three watersheds.

1. Himalayan range with its Karakoram branch in the north,
2. Vindhyan and Satpura ranges in Central India, and
3. Sahyadri or Western Ghats on the west coast.

Rivers and the Plains

The main rivers of the Himalayan group are the Indus, the Ganga and the Brahma-putra. These rivers are both snow-fed and rain-fed and have therefore continuous flow through-

India: Social Indicators

| | |
|----------------------------------------------|--------------------------------------------------------------|
| Population (million-2001 Census) | 1028.737 |
| Growth Rate | 1980-2001 1.9% |
| | 2002-2015 (Projected) 1.2% |
| Density (per sq.km) | 324 |
| Sex Ratio (Females per 1000 males) | 933 |
| | or Female population 48.1% |
| Literacy Rate | 64.84% |
| | (Male: 75.85%, Female: 54.16%, Rural: 59.40%, Urban: 80.30%) |
| Life Expectancy at birth | Male 63.9 |
| | Female 66.9 |
| Infant-Mortality (per 1000 live births) 2002 | 63 |
| Crude birth rate (per 1000 people) | 25 |
| Crude death rate (per 1000 people) | 8.1 |
| National Poverty Ratio (Projection for 2007) | 19.3% |
| | Rural 21.1% |
| | Urban 15.1% |
| Access to drinking water (of population) | 90% |
| Access to Sanitation facilities | 28% |
| Health Expenditure (of GDP) | 4.9% |
| | Private (of total health exp.-2000) 82% |
| | Public (of total health exp.-2000) 18% |
| Expenditure on Education (2003-04) | 3.74% |
| Total Labour Force (2001) | 460 million |
| | Projected (2010) 543 million |
| Growth rate per annum | 2 % |
| Labour Force Women | 32% |
| Total Employment (March 2000) | 397 million |
| Growth Rate | (1983-94) 2.04% |
| | (1994-2000) 0.98% |
| Organised Sector Employment | |
| | Public Sector 2003 27 million |
| | Private Sector 8.64 million |
| | Total 27.96 million |

Source: Economic Survey, Govt. of India 2004-05 and World Development Report, World Bank 2004

out the year. Himalayan rivers discharge about 70% of their inflow into the sea. This includes about 5% from central Indian rivers. They join the Ganga and drain into the Bay of Bengal.

The plains of Ganga and Indus runs for about 2400km with a width ranging from 240 to 320km. They are formed in the river basins of Ganga-Yamunā, Brahmaputra, Indus, Godavari, Kaveri, etc.

Length of some important rivers (in kms):

| | |
|-----------------|-------|
| (1) Indus | 2,900 |
| (2) Brahmaputra | 2,900 |
| (3) Ganga | 2,510 |
| (4) Godavari | 1,450 |
| (5) Narmada | 1,290 |
| (6) Krishna | 1,290 |
| (7) Mahanadi | 890 |
| (8) Kaveri | 760 |

Desert

The Desert region is located in the western and north western part of the country. It can be divided into two parts - the great desert and the little desert. The great desert extends from the edge of the Rann of Kutch beyond the Luni river northward. The whole of Rajasthan-Sind Frontier runs through this. The little desert extends from the Luni between Jaisalmer and Jodhpur up to northern wastes (dry and rocky land).

Peninsula

Peninsula is marked by elevated landmass with height ranging from 460 to 1220m. The Deccan and the Southern part surrounded by water on three sides make the peninsula. It is flanked by Eastern Ghats on the east and Western Ghat on the west. Between the Ghats and the Sea lies the narrow coastal belt.

Climate

Traditionally, seasons in India is divided into six - Vasanta (Mar-Apr), Grishma (May-Jun), Varsha (Jul-Aug), Sharada (Sept-Oct), Hemanta (Nov-Dec) and Shishira (Jan-Feb). In broad terms, India experiences 3 main seasons, such as (a) Winter - Dec to March, (b) Summer - Apr to May and (c) Monsoon - South West Jun to Sept, and NE (retreating SW monsoon) - Oct to Nov. Between the

two main seasons are Spring and Autumn. India receives 86% of the rain during SW monsoon. NE monsoon is a very restricted one - experienced in Tamil Nadu, Kerala and sometimes AP and Karnataka.

Natural Vegetation

India has 6 types of forests. (a) Evergreen (Tropical Forests) - is found in areas with 200cm to 300cm rainfall; av. annual temp. 20°C to 27°C; av. annual humidity >80% (b) Deciduous (Monsoon Forests) - found in places with lesser rainfall between 150 to 200 cm; mean annual temp between 24°C and 28°C; humidity 75% (c) Dry Forest - are found where rainfall is scanty between 75 to 100 cm; mean annual temp 23°C to 29°C; humidity 50 to 60% (d) Hill Forests are common in South India and Himalayas (e) Tidal Forests (Mangrove) are found in the coastal submerged plains of Ganges (Sundarbans), Maharastra, Godavari and Kerala and (f) Grasslands (Tropical Himalaya and Deccan hills above 100cm, lowland as in Punjab, Haryana, UP, Bihar, NW Azam and riverine grasslands - found along rivers).

Agriculture

India has two crop seasons. (a) Kharif Rice Jowar, Bajra, Ragi, Maize, Cotton, etc. Sowing - Jun/Jul, Harvest - Sept/Oct (b) Rabi Wheat, Barley, Peas, Rapeseed, Mustard, Gram. Sowing - Oct/Dec, Harvest - Apr/May.

The National Insignia

National Emblem

The state emblem of India is an adaptation from the Sarnath Lion, capital of Asoka the Emperor as preserved in the Sarnath Museum. The Government adopted the emblem on 26th January, 1950, the day when

India became a Republic. In the original of Sarnath Capital, there are four lions, standing back to back, mounted on an abacus with a frieze carrying sculpture in high relief of an elephant, a galloping horse, a bull and a lion separated by intervening wheels

(chakras) over a bell-shaped lotus. Carved out of a single block of polished sandstone, the Capital is crowned by the Wheel of the Law (Dharma Chakra).

In the state emblem adopted by the Government only three lions are visible, the fourth being hidden from view. The wheel appears in relief in the centre of the abacus with a bull on the right and a horse on the left and the outlines of the other wheels on the extreme right and left. The bell-shaped lotus has been omitted. The words, *Satyameva Jayate* from the Mundaka Upanishad meaning "Truth alone triumphs", are inscribed below the abacus in Devanagari script.

The National Flag

The National Flag is a horizontal tri-colour of deep saffron (Kesari) (representing 'courage and sacrifice') at the top, white ('peace and truth') in the middle and dark green ('faith and chivalry') at the bottom in equal proportion. The ratio of the width of the flag to its length is two to three. In the centre of white band is a wheel, in navy blue. Its design is that of the wheel (Chakra) which appears on the abacus of the Sarnath Lion Capital of Asoka. Its diameter approximates the width of the white band. It has 24 spokes.

The design of the National Flag was adopted by the Constituent Assembly of India on 22nd July, 1947. Its use and display are regulated by a code.

National Anthem

Rabindranath Tagore's song *Jana-gana-mana* was adopted by the Constituent Assembly as the National Anthem of India on 24th Jan. 1950 and gave *Vande Mataram* the national song equal honour. It was first sung on 27 Dec. 1911 at the Calcutta session of the INC. The first stanza (out of 5 stanzas) of the song forms the National

Anthem. Playing time of the full version of the national anthem is approximately 52 seconds. A shorter version consisting of the first and last lines of the stanza takes 20 seconds to play and it is played only on certain occasions.

*Jana-gana-mana-adhinayaka jaya he
Bharata-bhagya-vidhata.
Punjab-Sindhu-Gujarata-Maratha-
Dravida-Utkala-Banga
Vindhya-Himachala-Yamuna-Ganga
Uchchala-Jaiadhi-taranga
Tava Subha name jage,
Tava subha asisa mange,
Gahe tava jaya-gatha,
Jano-gana-mangala-dayaka, jaya he
Bharata-bhagya-vidhata.
Jaya he, jaya he, jaya he,
Jaya jaya jaya, jaya he.*

The following is Tagore's English rendering of the stanza:

*Thou art the ruler of the minds of all people,
Dispenser of India's destiny.
Thy name rouses the hearts of the Punjab,
Sind, Gujarat and Maratha,
Of the Dravid and Orissa and Bengal.
It echoes in the hills of the Vindhya and
Himalayas, mingles in the music of the
Jomun and the Ganges and is chanted by
the wives of the Indian Sea.
They pray for the blessings and sing thy praise.
The saving of all people waits in thy hand,
Thou dispenser of India's destiny, Victory,
victory, victory to thee.*

National Song

The song *Vande Mataram* composed by Bankim-chandra Chatterji has an equal status with *Jana-gana-mana*. The first political occasion when it was sung was the 1896 session of the INC.

*Vande Matorom,
Sujalam, suphonom, maloyaja shitalam,
Shoshyashyamolom, Matoram!
Shubhrajyotsna pulakitoyaminim,*

*Phullokusumita drumadala shobhinim,
Sahasnim sumadhura bhashinim, Sukadam
varadam, Mataram!*

English translation of the stanza rendered
by Sri Aurobindo (in Sri Aurobindo Birth
Centenary Library Popular Edition 1972, vol.
8), is

*I bow to thee, Mother,
richly-watered, richly-fruited,
cool with the winds of the south,
dark with the crops of the harvests,
The Mother !*

*Her nights rejoicing in the glory of the
moonlight,*

*Her lands clothed beautifully with her trees
in flowering bloom, sweet of laughter, sweet
speech,*

The Mother, giver of boons, giver of bliss.

National Calendar

At the time of independence, the Govt. of
India followed the Gregorian calendar based
on the Christian era.

The National Government adopted the
recommendation of the Calendar Reform
Committee that the Saka era be adopted as
the basis of the National Calendar. The Saka
year has the normal 365 days and begins
with Chaitra as its first month. The days of
the Saka calendar have a permanent corre-
spondence with the dates of the Gregorian

Calendar, Chaitra 1 falling on March 22 in a
normal year and on March 21 in a Leap Year.
The National Calendar commenced on
Chaitra 1 Saka, 1879 corresponding to March
22, 1957 A.D.

The months of the National Calendar,
with their days and the dates of the Gregorian
Calendar corresponding to the first day of
the Saka month are given below:

| Saka | Gregorian |
|----------------------|-------------|
| 1 Chaitra 30/31 days | March 22/21 |
| 1 Vaishaka 31 | April 21 |
| 1 Jyaishta 31 | May 22 |
| 1 Asadha 31 | June 22 |
| 1 Sravana 31 | July 23 |
| 1 Bhadra 31 | Aug. 23 |
| 1 Asvina 30 | Sept. 23 |
| 1 Kartika 30 | Oct. 23 |
| 1 Margasira 30 | Nov. 22 |
| 1 Pausa 30 | Dec. 22 |
| 1 Magha 30 | Jan. 21 |
| 1 Phalgun 30 | Feb. 20 |

Indian Standard Time (IST)

India has only one standard time. India is
5.5 hours ahead of GMT/UTC, 4.5 hours
behind Australian Eastern Standard Time
and 10.5 hours ahead of American Eastern
Standard Time.

Population

Populationwise, India is second in the
world. On May 11, 2000 India's popu-
lation reached the one billion mark. The
population increased to 1,027 million in
March, 2001 (531.3 m. males and 495.7 m.
females). India accounts for a meagre 2.4%

of the world surface area of 135.79 million
sq. km. but it supports 16.7% of the world
population. It is estimated that at the present
rate of growth (1.93% during 1991-2001) In-
dia will overtake China by 2050. Look at the
growth of population from 1901 to 2001.

Population Over a Century

| Years | Population |
|-------|----------------|
| 1901 | 23,83,96,327 |
| 1911 | 25,20,93,390 |
| 1921 | 25,13,21,213 |
| 1931 | 27,89,77,238 |
| 1941 | 31,86,60,580 |
| 1951 | 36,10,88,090 |
| 1961 | 43,92,34,771 |
| 1971 | 54,81,59,652 |
| 1981 | 68,33,29,097 |
| 1991 | 84,63,87,888 |
| 2001 | 1,02,70,15,247 |

Source: Census of India, 2001.

States and Union Territories by Population

| State/Union Territory | Per Cent to total population of India | 2001 | 1991 |
|-----------------------|---------------------------------------|-------|-------|
| Uttar Pradesh | | 16.17 | 15.60 |
| Maharashtra | | 9.42 | 9.33 |
| Bihar | | 8.07 | 7.62 |
| West Bengal | | 7.81 | 8.04 |
| Andhra Pradesh | | 7.37 | 7.86 |
| Tamil Nadu | | 6.05 | 6.59 |
| Madhya Pradesh | | 5.88 | 5.74 |
| Rajasthan | | 5.50 | 5.20 |
| Karnataka | | 5.14 | 5.31 |
| Gujarat | | 4.93 | 4.88 |
| Orissa | | 3.57 | 3.74 |
| Kerala | | 3.10 | 3.44 |
| Jharkhand | | .62 | 2.58 |
| Assam | | 2.59 | 2.64 |
| Punjab | | 2.37 | 2.40 |
| Haryana | | 2.05 | 1.95 |
| Chhattisgarh | | 2.03 | 2.08 |
| Delhi | | 1.34 | 1.11 |
| Jammu & Kashmir | | 0.98 | 0.92 |
| Uttaranchal | | 0.83 | 0.84 |
| Himachal Pradesh | | 0.59 | 0.61 |
| Tripura | | 0.31 | 0.33 |
| Manipur | | 0.23 | 0.23 |
| Meghalaya | | 0.22 | 0.21 |
| Nagaland | | 0.19 | 0.14 |
| Goa | | 0.13 | 0.14 |
| Arunachal Pradesh | | 0.11 | 0.10 |
| Pondicherry | | 0.09 | 0.10 |
| Chandigarh | | 0.09 | 0.08 |
| Mizoram | | 0.09 | 0.08 |
| Sikkim | | 0.05 | 0.05 |

| | | |
|----------------------|------|------|
| Andaman & Nicobar | 0.03 | 0.03 |
| Dadra & Nagar Haveli | 0.02 | 0.02 |
| Daman & Diu | 0.02 | 0.01 |
| Lakshadweep | 0.01 | 0.01 |

Source: Census of India, 2001

Rural and Urban Population 1901-2001

| Census | Popu | | Percentage of (m.) | |
|--------|------------|-------|--------------------|-------|
| | lation(m.) | | total population | |
| Year | Rural | Urban | Rural | Urban |
| 1901 | 213 | 26 | 89.2 | 10.8 |
| 1911 | 226 | 26 | 89.7 | 10.3 |
| 1921 | 223 | 28 | 88.8 | 11.2 |
| 1931 | 246 | 33 | 88.0 | 12.0 |
| 1941 | 275 | 44 | 86.1 | 13.9 |
| 1951 | 299 | 62 | 82.7 | 17.3 |
| 1961 | 360 | 79 | 82.0 | 18.0 |
| 1971 | 439 | 109 | 80.1 | 19.9 |
| 1981 | 524 | 159 | 76.7 | 23.3 |
| 1991 | 629 | 218 | 74.3 | 25.7 |
| 2001 | 741.7 | 285.4 | 72.22 | 27.78 |

Cities/Urban Agglomerations with over a million people

| ** | Urban Agglomerations /City | Population |
|----|----------------------------|------------|
| 01 | Greater Mumbai | 16,368,084 |
| 02 | Kolkata | 13,216,546 |
| 03 | Delhi | 12,791,458 |
| 04 | Chennai | 6,424,624 |
| 05 | Bangalore | 5,686,844 |
| 06 | Hyderabad | 5,533,640 |
| 07 | Ahmedabad | 4,519,278 |
| 08 | Pune | 3,755,525 |
| 09 | Surat | 2,811,466 |
| 10 | Kanpur | 2,690,486 |
| 11 | Jaipur* | 2,324,319 |
| 12 | Lucknow | 2,266,933 |
| 13 | Nagpur | 2,122,965 |
| 14 | Patna | 1,707,429 |
| 15 | Indore | 1,639,044 |
| 16 | Vadodara | 1,492,398 |
| 17 | Bhopal | 1,454,830 |
| 18 | Coimbatore | 1,446,034 |
| 19 | Ludhiana* | 1,395,053 |
| 20 | Kochi | 1,355,406 |
| 21 | Visakhapatnam | 1,329,472 |
| 22 | Agra | 1,321,410 |
| 23 | Varanasi | 1,211,749 |
| 24 | Madurai | 1,194,665 |
| 25 | Meerut | 1,167,399 |
| 26 | Nashik | 1,152,048 |

| | | |
|-------|------------|-------------|
| 27 | Jabalpur | 1,117,200 |
| 28 | Jamshedpur | 1,101,804 |
| 29 | Asansol | 1,090,171 |
| 30 | Dhanbad | 1,064,357 |
| 31 | Faridabad* | 1,054,981 |
| 32 | Allahabad | 1,049,579 |
| 33 | Amritsar | 1,011,327 |
| 34 | Vijayawada | 1,011,152 |
| 35 | Rajkot | 1,002,160 |
| Total | | 107,881,836 |

* Municipal Corporation **Rank in 2001

Source: Census of India, 2001

Sex Ratio: 1901-2001

| Years | Sex Ratio
Females per 1,000 males |
|-------|--------------------------------------|
| 1901 | 972 |
| 1911 | 964 |
| 1921 | 955 |

| | |
|------|-----|
| 1931 | 950 |
| 1941 | 945 |
| 1951 | 946 |
| 1961 | 941 |
| 1971 | 930 |
| 1981 | 934 |
| 1991 | 927 |
| 2001 | 933 |

Source: Census of India, 2001

Literacy Rate: 1951-2001

| Years | Persons | Malés | Females |
|-------|---------|-------|---------|
| 1951 | 18.33 | 27.16 | 8.86 |
| 1961 | 28.30 | 40.40 | 15.35 |
| 1971 | 34.45 | 45.96 | 21.97 |
| 1981 | 43.57 | 56.38 | 29.76 |
| 1991 | 52.21 | 64.13 | 39.29 |
| 2001 | 65.38 | 75.85 | 54.16 |

Source: Census of India, 2001

The People of India

Indian population is said to be the melting pot of various races. Few, if any, can claim to belong to any particular stock.

Races (as per classical pattern): According to Dr. B. S. Guha, the population of India is derived from 6 main ethnic groups: 1. Negrito; 2. Proto-Australoids or Austriacs; 3. Mongoloids; 4. Mediterranean or Dravidian; 5. Western Brachycephals and; 6. Nordic Aryans.

The Major Tribes who inhabit in India are Abors-Arunachal Pradesh, Assam; Adi, Apatami-Arunachal Pradesh; Angami, Ao-Nagaland; Badagas-Tamil Nadu; Baiga-MP, Rajasthan, Gujarat; Bhils-MP, Gujarat, Rajasthan; Bhotias-UP (Garhwal and Kumaon); Bhutias-Sikkim; Birhor-Bihar; Bodos-Assam; Chenchus-AP, Orissa; Chutias-Assam; Dangas-Gujarat; Gaddis-HP; Garos-Meghalaya; Gonds-MP, Bihar, Orissa, AP; Great

Andamanese-Andaman Is.; Irulas-Tamil Nadu; Jaintias-Meghalaya; Jarawas-Little Andamans; Kanis-Kerala; Kacharis, Karbi-Assam; Khampiti-Arunachal Pradesh; Khasis-Meghalaya, Assam; Khonds-Orissa; Kol-MP; Kotas-Tamil Nadu; Kuki-Manipur; Lepchas or Rongpa-Sikkim; Lushais-Tripura; Meiteis-Manipur, Nagaland; Mina-Rajasthan; Miri-Arunachal Pradesh; Mishings-Assam; Murias-MP; Mikirs-Assam; Mundas-Bihar; Oarons-Bihar, Orissa; Onges-Little Andamans; Rabhas-Assam; Rengma-Nagaland; Santhals-W. Bengal, Bihar; Sema-Nagaland; Sentineles-Andaman & Nicobar Is.; Shompens-Great Nicobar Is.; Tagin-Arunachal Pradesh; Todas-Tamil Nadu; Uralis-Kerala; Zeliang-Nagaland.

Scheduled Castes & Tribes There are 13.82 crores people belonging to the Scheduled Castes in the country. This constitutes

Religions of India

| Religious group | 1971 | | 1981 | | 1991 | | 2001 | |
|-----------------|-------------|----------|-------------|----------|-------------|----------|-------------|----------|
| | Number (m.) | Per cent | Number (m.) | Per cent | Number (m.) | Per cent | Number (m.) | Per cent |
| Hindus | 453.4 | 82.7 | 549.7 | 82.6 | 672.6 | 82.41 | 827.5 | 80.4 |
| Muslims | 61.4 | 11.2 | 75.6 | 11.4 | 95.2 | 11.67 | 138.2 | 13.4 |
| Christians | 14.3 | 2.6 | 16.2 | 2.4 | 18.9 | 2.32 | 24.1 | 2.3 |
| Sikhs | 10.4 | 1.9 | 13.1 | 2.0 | 16.3 | 1.99 | 19.2 | 1.8 |
| Buddhists | 3.9 | 0.7 | 4.7 | 0.7 | 6.3 | 0.77 | 7.9 | 0.6 |
| Jains | 2.6 | 0.5 | 3.2 | 0.5 | 3.4 | 0.41 | 4.2 | 0.3 |
| Others | 2.2 | 0.4 | 2.8 | 0.4 | 3.5 | 0.43 | 7.3 | 0.6 |
| Total | 548.2 | 100.0 | 665.3 | 100.0 | 816.2 | 100.0 | 1028.4 | 100.0 |

16.48% of the country's total population. The States of UP, West Bengal, Bihar, Tamil Nadu and Andhra Pradesh account for more than 50% of the SC population, with UP and West Bengal having more than 20% of its population from the SCs. Members of the SC earn their livelihood through their own

labour, either on land belonging to others or in occupations like scavenging, flaying and tanning of leather. More than 3 quarters of the SC workers are engaged in primary occupation and the proportion of those engaged in the tertiary sector is nearly half the national average. In the field of literacy

Languages of India*- Number of Speakers

| Language | Persons who have written the language as their mother tongue | | | Percentage to total population | | |
|-----------|--------------------------------------------------------------|--------------|--------------|--------------------------------|-------|------|
| | 1971 | 1981 | 1991 | 1971 | 1981 | 1991 |
| Hindi | 20,85,14,005 | 26,45,14,117 | 33,72,72,114 | 38.04 | 38.71 | 39.8 |
| Bengali | 4,47,92,312 | 5,12,98,319 | 6,95,95,738 | 8.17 | 7.51 | 8.2 |
| Telugu | 4,47,56,923 | 5,06,24,611 | 6,60,17,615 | 8.16 | 7.41 | 7.8 |
| Marathi | 4,17,65,190 | 4,94,52,922 | 6,24,81,681 | 7.62 | 7.24 | 7.3 |
| Tamil | 3,76,90,106+ | N.A | 5,30,06,368 | 6.88 | N.A | 6.2 |
| Urdu | 2,86,20,895 | 3,49,41,435 | 4,34,06,932 | 5.22 | 5.11 | 5.1 |
| Gujarati | 2,58,65,012 | 3,30,63,267 | 4,06,73,814 | 4.72 | 4.84 | 4.8 |
| Kannada | 2,17,10,649 | 2,56,97,146 | 3,27,53,676 | 3.96 | 3.76 | 3.8 |
| Malayalam | 2,19,38,760 | 2,57,00,705 | 3,03,77,176 | 4.00 | 3.76 | 3.5 |
| Oriya | 1,98,63,198 | 2,30,21,528 | 2,80,61,313 | 3.62 | 3.37 | 3.3 |
| Punjabi | 1,41,08,443 | 1,96,11,199 | 2,33,78,744 | 2.57 | 2.87 | 2.7 |
| Assamese | 89,59,558 | N.A | 1,30,79,696 | 1.63 | N.A | 1.5 |
| Sindhi | 16,76,875 | 20,44,389 | 21,22,848 | 0.31 | 0.30 | 0.2 |
| Nepali | 14,19,835 | 13,60,636 | 20,76,645 | 0.26 | 0.20 | 0.2 |
| Konkani | 15,08,432 | 15,70,108 | 17,60,607 | 0.28 | 0.23 | 0.2 |
| Manipuri | 7,91,714 | 9,01,407 | 12,70,216 | 0.14 | 0.13 | 0.1 |
| Kashmiri | 24,95,487 | 31,76,975 | N.A | 0.46 | 0.46 | N.A |
| Sanskrit | 2,212 | 6,106 | 49,736 | N | N | 0.0 |

N.A.: Not available; N: Negligible * Figures for 18 of the 22 Languages. Speakers of Bodo: 12,21,881 (1991 census); Dogri: 21,05,000 (1997 IMA); Santhali: 52,16,325 (1991 census); Maithili: 2,20,00,000 (1981 census).

as against the national average of 52%, the literacy rate of SCs is around 37%. Among the SC women, more than three quarters are illiterate. Moreover, the drop out rate in formal education is very high. Such factors put the community at disadvantage.

The population of Scheduled Tribes were 6.78 crore (191 Census) constituting 8.08% of the country's total population. Their literacy is just 29.60%. Literacy among the women is 18.19% compared to the national average of 39.29%.

Indian Languages

Although Hindi is the national language, India is believed to have 1652 mother tongues of which 33 are spoken by people numbering over a lakh. The officially recognised lan-

guages are 22. In fact, English is widely spoken and perhaps the link between North and South India.

Schedule Languages: A schedule—the 8th Schedule—was added to the Constitution to indicate all regional languages statutorily recognised. The Schedule originally contained 14 languages as follows:

(1) Assamese; (2) Bengali; (3) Gujarati; (4) Hindi; (5) Kannada; (6) Kashmiri; (7) Malayalam; (8) Marathi; (9) Oriya; (10) Punjabi; (11) Sanskrit; (12) Tamil; (13) Telugu; (14) Urdu.

Sindhi was added in 1962. By the 71st Amendment to the Constitution, Konkani, Manipuri and Nepali were added to the list in 1992.

In 2003, four more languages, were added: Bodo, Dogri, Maithili and Santhali. (92nd Amendment)

THE CONSTITUTION

The Constitution of India was drawn up by a Constituent Assembly (established in accordance with the Cabinet Mission Plan) initially summoned on Dec. 9, 1946, under the presidentship of Sachidananda Sinha, for undivided India. On July 1, 1947, the British parliament passed the 'Indian Independence Act', to divide it into India and Pakistan. With the partition of India the representatives of East Bengal, West Punjab, Sind and Baluchistan, N-W Frontier Province and the Sylhet Dist. of Assam, which joined Pakistan, ceased to be members of the Constituent Assembly. On August 14, 1947, the Constituent Assembly met again as the Sovereign Constituent Assembly for the Dominion of India under the presidentship of Sachidananda Sinha. On the demise of Sinha,

Dr. Rajendra Prasad became the President of the Assembly. A draft Constitution was published in February 1948. 284 out of 299 members appended their signature to the Constitution and finally adopted it on 26th Nov 1949. It came into effect on 26th Jan 1950.

Draft Constitution Drafting Committee

The work started with the presentation of the 'Objective Resolution' (the underlying ideology/philosophy) moved by Pandit Jawaharlal Nehru was adopted on Jan. 22, 1947. The committee for scrutinising the draft constitution and suggesting amendments was formed on August 29, 1947. The draft was readied by Feb. 1948. The Constituent Assembly met thrice to read the draft clause-by-clause in Nov. 1948, Oct. 1949 and Nov. 1949. After the

third reading, it was signed by the President and adopted on Nov. 26, 1949. In fact, a Committee on Rules of Procedure was in place as early as Dec. 1946. Chairman: Dr. B.R. Ambedkar.

Members: Alladi Krishnaswami Ayyar, N. Gopalaswami Ayyangar, Dr. K.M. Munshi, Syed Md. Saadulla, B.L. Mitter (was replaced by N. Madhava Rao) and D.P. Khaitan (was replaced by T.T. Krishnamachari).

The Indian Constitution closely follows the British Parliamentary model but differs from it in one important respect that is, the Constitution is supreme, not Parliament. So the Indian courts are vested with the authority to adjudicate on the constitutionality of any law passed by Parliament (ref. to 42nd Constitution Amendment Act).

The Constitution consists of the following: 1. The Preamble; 2. Parts I to XXII covering Articles 1 to 395; 3. Schedules 1 to 12 and 4. An Appendix. Part IX-The panchayats and Schedule XI (Article 243-G) have been incorporated under 73rd Constitution Amendment Act, 1992.

Amendments since 2000

80. (2000) deals with an alternative scheme for sharing taxes between the Union and the states.

81. (2000) provides that the unfilled vacancies of a year reserved for SC/ST kept for being filled up in a year as per Article 16, shall be considered separately for filling vacancies in the succeeding year and the previous list will not be considered for filling the 50% quota of the respective year.

82. (2000) provides that nothing in the article 355 shall prevent the state from making any provisions in favour of the members of SC/ST for relaxation in qualifying marks with respect to examination/job/promotion.

83. (2000) The Act amended Article 243M to provide that no reservation in Panchayats be made in favour of SC/ST in Arunachal Pradesh where the whole population is tribal.

84. (2001) - The Act amended provisos to Articles 82 and 170(3) to readjust the territorial

constituencies in the States, without altering the number of seats allotted to each State in House of People and Assemblies, including the S.C. & S.T. constituencies 1991.

85. (2001) - Amended Article 16(4A) to provide for consequential seniority in promotion by virtue of rule of reservation for the Government servants belonging to the Scheduled Castes and the Scheduled Tribes.

86. (2002) provides for (i) insertion of a new article 21A that the State shall provide free and compulsory education to all children of the age of six to fourteen years in such manner as the state may, by law, determine.

87. (2003) This Article provides that in Article 81 of the Constitution, in clause (3), in the proviso, in clause (ii), for the figures "1991", the figures "2001" shall be substituted.

88. (2003) This Article provides for the insertion of a new article 268A which states that taxes on services shall be levied by the Government of India and such tax shall be collected and appropriated by the government of India and the States in the manner provided in clause (2).

89. (2003) This Article provides for the amendment of Article 33B and insertion of a new article 338A which provides that there shall be a National Commission for ST.

90. (2003) This Amendment provided that for elections to the Legislative Assembly of the State of Assam, the representation of the Scheduled Tribes and non-Scheduled Tribes in the constituencies included in the Bodoland Territorial Areas District, so notified, and existing prior to the constitution of the Bodoland Territorial Areas District, shall be maintained.

91. (2003) This Article provides that the total number of Ministers, including the Prime Minister, in the Council of Ministers shall not exceed fifteen per cent of the total number of members of the House of the people.

92. (2003) This Article provides for the inclusion of four new languages, viz. Bodo, Dogri, Maithili and Santhali in the Eighth Schedule of the Constitution.

Indian Economy: A Review of Recent Developments

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The current developments of the Indian economy can be examined only in the context of the economic reforms implemented since 1991. The Structural Adjustment Reforms have been implemented in India in order to solve the unprecedented economic crisis of the Indian economy during early 1990s. There had been a sharp decline in foreign exchange reserves, capital inflows through commercial borrowings and non-residents deposits. The country had been experiencing large and persistent macro economic imbalances, low productivity and low rate of return from investment. The fiscal deficit of the central and state governments reached an alarming level. There had been a steep increase in external and internal debt. The country began to experience a double digit inflation. The thrust of the reform process was to increase the efficiency and international competitiveness of industrial production, to utilize for this purpose foreign investment and foreign technology to a greater degree than in the past, to increase the productivity, to modernize the financial sector and to attain a technological and competitive edge in the fast-changing global economy. During the last one and a half decades the performance of Indian economy was much better compared to the previous periods. In this context, the article examines the recent developments of the Indian economy.

1. Economic Growth and Structural Change Economic Growth

Annual economic growth is the indicator which reflects the performance of any

economy. Economic growth is calculated on the basis of increase in the Gross Domestic Product indicating the value of goods and services produced in an economy during a year and estimated either at current or constant prices. The sector-wise annual growth rate of Indian economy estimated at constant prices are given in Table 1. The table shows that the overall growth of the Indian economy was at a higher rate during the decade 1990's compared to the earlier decade. During 1990's the economy achieved a growth rate ranging between 6 to 7.3 percent during five years. During the present decade the economy achieved a higher rate since 2003-04.

An attempt is made to examine the sector-wise growth rate of Indian economy during the post-reform period. It is found that the primary sector comprising agriculture, forestry, fishing, mining and quarrying registered very low or negative growth rate in four years during the decade 1990's. During the new millennium, the sector also registered a negative or very low rate of growth in 2000-01 and 2002-03. The major factor which determines the growth rate of the primary sector was the availability of adequate rainfall.

The growth of the secondary sector registered a strong performance during 1990's, especially, 1991 and 1992. During 1991-92, the sector registered a growth rate of 10.1 percent and above. However, the performance of the sector during the first half of the present decade was disappointing.

Compared to the primary and secondary sectors the tertiary sector comprising trade, hotels, transport and communications, financing, insurance, real estate and business services, public administration and defence etc. registered a higher growth rate during the post-reform period (Table 1). During the last five years the sector witnessed an average rate of growth of more than 7 percent. Thus, a review of sector-wise growth rate of Indian economy shows that the economic reforms have accelerated a higher rate of growth of tertiary sector during the post-reform period compared to other sectors (Table 1).

Structural change

The structural change which denotes the changes in the share of primary, secondary and tertiary sectors to the total Gross Domestic Product, gives an idea about the broad changes that have been taking place in an economy. The broad changes in the structure of Indian economy during the post-reform period is shown in Table 2. A major change is the decline in the importance of primary sector comprising agriculture and allied activities. The share of the sector fell from 34.93 percent in 1991 to 22.97 percent in 2004-05. In the case of the secondary sector, the sectoral share registered a marginal decline during the post-reform period. On the other hand, the share of the tertiary sector had witnessed a continuous increase. Currently, 53.22 percent of the national income is produced in the tertiary sector. Thus, the economic reforms had initiated a process of structural change favouring the rapid growth of tertiary activities.

Economic Indicators

Based on the selected economic indicators, an attempt is made to provide the broad changes in national income, per capita income, industrial production, agricultural production, gross domestic capital formation and plan outlay during the first half of the

present decade. Table 3 gives the selected economic indicators. The GDP at constant prices has increased from Rs. 18,70,387 crore in 2001 to Rs. 23,93,671 crore in 2004-05. Per capita income at constant prices increased from Rs. 16,223 to Rs. 19,699 during the period. The index of industrial production showed a steady rise during the period. On the other hand, the index of agriculture production registered a fall during two years. The gross domestic savings registered a steady increase during this period. The annual plan outlay also registered a rise and Rs. 2,69,267 crore was proposed as the annual plan outlay for 2004-05.

Table 4 presents the key indicators of output such as food grains, finished steel, cement, coal, crude oil and electricity generated. During the first half of the present decade except food grains, all other outputs have registered an increase.

Health indicators

Another issue is the impact of the economic reforms on the health status of the people. From table 5 we get the broad changes in the health status of the people. During the decade 1990's there has been a decline in birth rate, death rate and fertility rates. The maternal mortality ratio, infant mortality rate, child mortality rate also registered a decline. Another notable development was the increase in the life expectancy of population. Thus, the above facts suggest that the economic reforms have helped to improve the health status of the people to some extent.

II. Agriculture

Agriculture and allied sectors provide more than half of the total employment and nearly one-fourth of the national income (GDP). According to the NSSO survey 2004, 66 percent of the usually employed males and 84 percent of the usually employed females were engaged in agriculture sector in rural

III Industry, Infrastructure, and services

Industry

During the beginning of the present millennium the industrial production remained very low especially in 2001-02 (Table 12). However, the industrial sector was able to achieve a recovery in production due to higher rate of growth of manufacturing and mining and quarrying activities. On the other hand, the growth of electricity production remained at a lower rate. The industries which witnessed rapid development during 2004-05 are beverages and tobacco products, textile products, paper and paper products, non electrical machinery, transport equipments and other manufacturing industries. Some of the industries which recorded higher rates of growth are automobile industries, textiles, gems and jewellery. The latest data on industrial production suggest that the manufacturing sector has recorded a higher growth in 2005-06 compared to the previous year. It is estimated that the manufacturing sector has recorded a growth of 9 percent in 2005-06 (April-February). It accounted for 93 percent of the total industrial sector growth. The important industries which registered an acceleration in growth during 2005-06 are other manufacturing industries, textile products, beverages and tobacco related products, basic metal and alloy, transport equipment etc. (Table 13).

On the other hand, the industries which experienced deceleration in growth are machinery and equipment other than transport, chemical and chemical products, jute and other fibres, paper and paper products etc. During the above period the industries which witnessed a negative growth are metal products, leather products and wood products.

Infrastructure

A review of the growth of physical output in infrastructure sectors indicates a moderate growth between 2001-02 to 2004-05 (Table

14). In the case of coal production and electricity generation the growth rate was low or moderate. The trends in crude oil production remained at low level. However, the production of steel and cement remain at moderate level. In the communication sector, rapid growth was recorded in the new telephone connections especially mobile phones. The number of mobile phones has increased from 6.54 lakh in March 2002 to 78.08 lakh in September 2005 (Table 15). It may be pointed out that basic infrastructure items like electricity, coal and petroleum products have not recorded higher levels required for attaining higher output in other sectors.

Services

Table 16 shows the indicators of the service sector during the last two years. During 2004-05 the indicators which recorded a higher growth are tourist arrivals, commercial vehicle production, new cell phone connections, import of cargo handled in civil aviation, passengers handled in domestic terminal and upgradation of highways. Growth in bank deposits, sustained acceleration in non-food credit, an increased export of information technology and enabled services have also contributed to the growth of service sector. But the tempo of the growth was not continued during 2005-06. The table shows that the majority of the indicators recorded a decline in the year 2005-06.

IV. External Sector

A notable achievement of the economic reforms has been the steady and sustained improvement of the Balance Of Payment (BOP) positions of India till 2003-04. Table 17 gives the summary of the BOP situation between 2000-01 to 2004-05. The recent developments in the BOP situation are given below.

Compared to 2003-04 there has been a deterioration in BOP situation in 2004-05 due

to the following factors. While the value of exports increased by 24 percent the import recorded growth rate of 48 percent resulting in an increase in trade balance. A major factor contributed to the increase in the imports was contributing the increase in world oil prices. The growth in the value of Petroleum Oil and Lubricants (POL) products was 45 percent during the year. There has been a decline in the invisibles, especially private transfers. All these have contributed to the deficit of current account in 2004-05. This marked a significant departure in the structural composition of India's BOP, with current account after three consecutive years of surplus turning into deficit. These developments can be considered as the indication of a deterioration in BOP situation. During the year there has been an increase in the external assistance and also commercial borrowings. However, there has been some improvement in capital account due to foreign investment flows and other financial flows to the country.

India's foreign trade data recently released by Ministry of Commerce and Industry indicate sustained high growth in merchandise exports and imports during 2005-06 (RBI Bulletin, May 2006). While the value of the exports in US \$ increased by 25 percent the import recorded the growth of 31.7 percent. The import of POL increased by 46.9 percent. The average crude oil price (Indian basket) during 2005-06 stood at US \$ 55.4, higher by 42.4 percent than a year ago. The non-oil imports recorded a growth of 26.8 percent during 2005-06. And the trade deficit stood at US \$ 39.6 billion during 2005-06, higher by 52.7 percent than the previous year. The developments in the export and import indicate a further deterioration in the BOP situation during 2005-06.

A trend in the growth of foreign exchange reserves will give us an idea about the stability the country achieved in the external sector. If foreign exchange reserves comprise gold,

Reserve Tranche Position in IMF, Special Drawing Rights (SDR) and foreign currency assets. Table 18 gives the trend in the foreign exchange reserves between 1990-91 and November 2005. The growth in foreign exchange reserves is mainly due to the growth in foreign currency assets. The total foreign exchange reserves of the country increased from \$5,834 million in 1990-91 to \$42,281 million in 2000-01. By the year 2005, it further increased to \$1,42,821 million. There has been a sustained increase in foreign exchange reserves during the first half of the present decade.

Commodity Composition of exports and Imports

India is a major exporter and importer of a number of products. Table 19 gives the commodity composition of exports. The three major categories of products exported from India are primary products, manufactured goods and petroleum and crude products. Primary products comprises of agriculture and allied, ores and minerals account for 16 percent of the total value of exports. Engineering goods, gems and jewellery, textile items, chemical and related products are the major industrial products exported from India. Nearly 72 percent of the exports are manufactured products. The structure of exports suggests that India has reached a stage of an industrially developed country, exporting industrial products.

Table 20 gives the principal commodities imported to India. POL account for nearly 32 percent of the value of imports. Capital goods and gold and silver account for another 20 percent of the value of imports. The other important items of imports are pearls and precious stones, electronic goods, chemicals, edible oils, coke, coal and metaliferrous ores. POL, capital goods and ores are the items having a highest increase in imports recently.

V. Inflation, Unemployment and Poverty

Inflation the whole sale price index, which reflects changes in the price of 447 commodities covering all traded goods in primary sector, fuel, power and manufacturing sector is the principal indicator of inflation. Table 21 gives the trends in inflation during the post-reform period. During the early years of the post-reform period, Indian economy had witnessed an acceleration of inflationary trends. During the first half of the 1990's, the annual average rate of inflation was more than 10 percent. However, the rate of inflation registered a fall during the second half of the 1990s and the first half of the present decade. The increase in prices of fuel is a major cause for the increase in inflation in recent years.

Unemployment

We also present the trends in unemployment based on recent estimates of National Sample Survey Organisation (NSSO). Here the definition used to measure unemployment is Current Daily Status definition (CDS). The CDS indicates the unemployment status of a person without gainful employment and seeking employment during all the seven days in a week. The rate of unemployment is the ratio of unemployed days per week to the total labour supply per week (working plus seeking plus available days). According to NSSO survey, the unemployment rate for males and females both in rural and urban areas has recorded an increase between 1993-94 and 2004 (Table 22). Currently 9 per cent of the males and 9.3 percent of female labour force is unemployed in rural areas. The corresponding rates for urban areas are 8.1 percent and 11.7 percent.

Poverty

Incidence of poverty is estimated on the basis of poverty line. The poverty line serves as a cut-off line for separating the poor from the non-poor, given the size distribution of

population by per capita consumer expenditure classes. Population with per capita consumer expenditure levels below the level defined by the poverty line is counted as poor. The Expert Group of Planning Commission (1993) has recommended a monthly per capita total expenditure, of Rs. 115.43 (rural) and 165.58 (urban) in 1987-88 as the poverty line for the country as a whole. At this level of per capita total expenditure it is expected that a person will get the required per capita daily intake of 2400 calories in rural areas and 2100 calories in urban areas. Table 23 shows the poverty rated and the total number of poor persons in India. The data indicates that there has been a decline in poverty between 1993-94 and 1999-2000.

VI. Where do we stand?

During the recent years, Indian economy recorded a mixed performance of positive as well as negative developments. The growth rates of secondary and tertiary sectors were better since 2002-03. But the agricultural sector recorded a low or negative growth rate. A review of the key indicators of output revealed that except foodgrains, all other output have recorded an increase during the recent years. A unfavourable development is the low rate of growth of physical output in infrastructure especially electricity, coal and petroleum products. In the case of services the growth of major items of services recorded a marginal decline in 2005-06. A disturbing development is the deterioration in the overall BOP situation in recent years. The hike in oil prices, steep increase in exports and decline in the inflow of invisibles have led to a deficit in current account. However, India has a comfortable foreign exchange reserve situation. Another negative development is the increase in the rate of unemployment both in urban and rural areas. This indicates that the economic reforms have not succeeded in generating more jobs for the unemployed labour force.

Table 1
Annual Growth Rates of Gross Domestic Product

(Per Cent)

| Year | Agriculture
forestry &
fishing
mining and
quarrying | Manufacturing
construction
electricity
gas and water
supply | Trade
hotels,
transport &
commu-
nication | Financing
Insurance, real
estate
and business
services | Public
administration
& defence
and other
services | Gross
domestic
product at
factor
cost (2to6) |
|-------------|-----------------------------------------------------------------|-------------------------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------|
| | 2 | 3 | 4 | 5 | 6 | 7 |
| | At 1993-94 prices | | | | | |
| 1990-91 | 4.6 | 7.4 | 4.9 | 7.7 | 4.1 | 5.6 |
| 1991-92 | -1.1 | -1.0 | 2.5 | 12.0 | 2.6 | 1.3 |
| 1992-93 | 5.4 | -1.3 | 5.6 | 5.9 | 4.6 | 5.1 |
| 1993-94 | 3.9 | 5.6 | 7.1 | 13.4 | 3.5 | 5.9 |
| 1994-95 | 5.3 | 10.3 | 10.4 | 5.6 | 3.2 | 7.3 |
| 1995-96 | -0.3 | 12.3 | 13.3 | 8.2 | 7.9 | 7.3 |
| 1996-97 | 8.8 | 7.7 | 7.8 | 7.0 | 6.3 | 7.8 |
| 1997-98 | -1.5 | 3.8 | 7.8 | 11.6 | 11.7 | 4.8 |
| 1998-99 | 5.9 | 3.8 | 7.7 | 7.4 | 10.1 | 6.5 |
| 1999-2000 | 0.6 | 4.9 | 8.5 | 10.6 | 12.2 | 6.1 |
| | New Series at 1999-2000 prices | | | | | |
| 2000-01 | 0.2 | 6.7 | 7.1 | 4.1 | 4.7 | 4.4 |
| 2001-02 | 5.8 | 2.8 | 9.2 | 7.3 | 3.9 | 5.8 |
| 2002-03 | -5.6 | 6.8 | 9.1 | 8.0 | 3.8 | 3.8 |
| 2003-01 (P) | 9.6 | 7.9 | 12.0 | -1.5 | 5.4 | 8.5 |
| 2004-05 (Q) | 1.2 | 8.9 | 10.6 | 9.2 | 9.2 | 7.5 |
| 2005-06 (A) | 2.3 | 9.0 | 11.1 | 9.5 | 7.9 | 8.1 |

P: Provisional; Q: Quick estimates; A: Advance Estimates

Source: Economic Survey, 2005-06

Table 2
Sector-wise change of Gross Domestic Product

| Year | Primary | Secondary | Tertiary | Total |
|-------------|---------|-----------|----------|--------|
| 1990-91* | 34.93 | 21.49 | 40.58 | 100.00 |
| 1999-2000** | 27.65 | 23.09 | 49.25 | 100.00 |
| 2004-05** | 22.97 | 23.80 | 53.22 | 100.00 |

* Based on 1993-94 prices ** Based on 1999-2000 prices

Source: Economic Survey, 2005-06

Table 3
Selected Economic Indicators

| | 1990-91 | 2000-01 | 2001-02 | 2002-03 | 2003-01 | 2004-05 |
|--------------------------------------------------------------------------|----------|-----------|-----------|-----------|------------|------------|
| GDP at factor cost: \$ | | | | | | |
| i. At current prices
(Rs. crore) | 5,10,954 | 19,30,184 | 20,97,446 | 22,55,574 | 25,43,396* | 28,43,897* |
| ii. At constant prices
(Rs. crore) | 6,92,871 | 18,70,387 | 19,78,055 | 20,52,586 | 22,26,041* | 23,93,671* |
| Per capita net
national product,
at constant prices\$
(Rs. per) | 7,321 | 16,223 | 16,910 | 17,281 | 18,517* | 19,649* |
| Index of Industrial
production
(Base 1993-94=100) | 91.6 | 162.6 | 167.0 | 176.6 | 189.0 | 204.8 |

| | | | | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------|--------|----------|----------|----------|-------------------|-------------------|
| Index of agricultural production (Base: triennialmending 1981-82) | 148.4 | 165.7 | 178.8 | 150.4 | 181.0 | 179.2 |
| Gross domestic capital formation\$ (as per cent of GDP) | 26.3 | 24.2 | 23.0 | 25.3 | 27.2 ^p | 30.1 ^q |
| Gross domestic savings\$ (as percent of GDP) | 23.1 | 23.5 | 23.6 | 26.5 | 28.9 ^p | 29.1 ^q |
| Plan Outlay (Rs. crore) | 58,369 | 1,85,737 | 1,86,315 | 2,10,203 | 2,43,550(RE) | 2,69,267(BE) |
| \$ Prior to 2000-01 based on 1993-94 series, others on new series 1999-2000. | | | | | | |
| P: Provisional; Q: Quick; RE: Revised Estimate; BE: Budget estimate Source: Economic Survey, 2005-06 | | | | | | |

Table 4
Key Indicators of Output

| | 1990-91 | 2000-01 | 2001-02 | 2002-03 | 2003-04 | 2004-05 |
|---------------------------------------------------------|---------|---------|---------|---------|---------|---------|
| a. Foodgrains (million tonnes) | 176.4 | 196.8 | 212.9 | 174.8 | 213.5 | 204.6 |
| b. Finished Steel (million tonnes)EE | 13.5 | 30.3 | 31.1 | 33.4 | 36.9 | 39.3 |
| c. Cement (million tonnes) | 48.8 | 97.6 | 106.9 | 116.3 | 123.5 | 133.6 |
| d. Coal (including lignite) (million tonnes) | 225.5 | 332.6 | 352.6 | 367.2 | 389.3 | 412.9 |
| e. Crude oil (million tonnes) | 33.0 | 32.4 | 32.0 | 33.0 | 33.4 | 34.0 |
| f. Electricity generated (utilities only) 8billion KWH) | 264.3 | 499.5 | 517.4 | 532.7 | 565.1 | 608.6 |

EE including secondary producers

Source: Economic Survey, 2005-06

Table 5
Selected health indicators

| Parameter | | 1981 | 1991 | Current level |
|-----------|-----------------------------------------------------------|------|-------------------|-------------------|
| 1. | Crude birth rate (Per 1,000 population) | 33.9 | 29.5 | 24.8 (2003) |
| 2. | Crude death rate (Per 1,000 population) | 12.5 | 9.8 | 8.0 (2003) |
| 3. | Total fertility rate (TFR) (Per woman) | 4.5 | 3.6 | 3.0 (2001) |
| 4. | Maternal mortality ratio (MMR) (Per 1,00,000 live births) | NA | 437
(1992-93) | 407 (1998) |
| 5. | Infant mortality rate (IMR) (Per 1,000 live births) | 110 | 80 | 60 (2003) |
| 6. | Child (0-4) mortality rate (Per 1,000 children) | 41.2 | 26.5 | 17.8 (2002) |
| 7. | Couple protection rate (per cent)* | 22.8 | 44.1 | 48.2
(1998-99) |
| 8. | Life expectancy at birth | | | |
| | 8.1 Male | 54.1 | 59.7
(1991-95) | 63.9
(2001-06) |
| | 8.2 Female | 54.7 | 60.9
(1991-95) | 66.9
(2001-06) |

Note: The dates in the brackets indicate years for which information is available

NA: Not Available

Source: Economic Survey, 2005-06

Table 6
Foodgrains production

(million tonnes)

| Crop/Year | 2000-01 | 2001-02 | 2002-03 | 2003-04 | 2004-05* |
|------------------|---------------|---------|---------|---------|----------|
| Rice | 85.0 | 93.3 | 71.8 | 88.3 | 85.3 |
| Wheat | 69.7 | 72.8 | 65.8 | 72.1 | 72.0 |
| Coarse Cereals | 31.1 | 33.4 | 26.1 | 38.1 | 33.9 |
| Pulses | 11.1 | 13.4 | 11.1 | 14.9 | 13.4 |
| Foodgrains | | | | | |
| (i) | <i>Kharif</i> | 102.1 | 112.1 | 87.2 | 116.9 |
| 103.3 | | | | | |
| ii. | <i>Rabi</i> | 94.7 | 100.8 | 87.6 | 96.6 |
| 101.3 | | | | | |
| Total (i) + (ii) | 196.8 | 212.9 | 174.8 | 213.5 | 204.6 |

* 4th advance estimates

Source: Economic Survey, 2005-06

Table 7

Production of Foodgrains in three largest producing states

Year: 2004-05 (P)

| | States | Production | Per cent Share of Production to All India | (Production Million Tonnes)
Cumulative per cent of Production |
|----------------------|----------------|------------|-------------------------------------------|------------------------------------------------------------------|
| Rice | West Bengal | 14.91 | 17.48 | 17.48 |
| | Uttar Pradesh | 10.88 | 12.75 | 30.23 |
| | Punjab | 10.44 | 12.24 | 42.47 |
| Wheat | Uttar Pradesh | 24.78 | 34.42 | 34.42 |
| | Punjab | 14.87 | 20.65 | 55.07 |
| | Haryana | 9.16 | 12.72 | 67.79 |
| Maize | Karnataka | 2.38 | 16.83 | 16.83 |
| | Andhra Pradesh | 1.92 | 13.58 | 30.41 |
| | Uttar Pradesh | 1.49 | 10.54 | 40.95 |
| Total Coarse Cereals | Maharashtra | 6.02 | 17.75 | 17.75 |
| | Karnataka | 5.77 | 17.01 | 34.76 |
| | Rajasthan | 4.88 | 14.39 | 49.15 |
| Total Pulses | Madhya Pradesh | 3.43 | 25.64 | 25.64 |
| | Uttar Pradesh | 2.36 | 17.64 | 43.27 |
| | Maharashtra | 1.70 | 12.71 | 55.98 |
| Total foodgrains | Uttar Pradesh | 41.46 | 20.26 | 20.26 |
| | Punjab | 25.84 | 12.63 | 32.89 |
| | West Bengal | 16.25 | 7.94 | 40.83 |

Source: Economic Survey, 2005-06

Table 8

Commercial crops: production

| Crop/Year | 2000-01 | 2001-02 | 2002-03 | 2003-04 | 2004-05@ |
|---------------------|---------|---------|---------|---------|----------|
| Groundnut | 6.4 | 7.0 | 4.1 | 8.2 | 7.0 |
| Rapeseed & Mustard | 4.2 | 5.1 | 3.9 | 6.2 | 8.4 |
| Soyabean | 5.3 | 6.0 | 4.7 | 7.9 | 7.5 |
| Other oilseeds | 2.5 | 2.6 | 2.1 | 3.0 | 3.2 |
| Total nine oilseeds | 18.4 | 20.7 | 14.8 | 25.3 | 26.1 |
| Cotton* | 9.5 | 10.0 | 8.6 | 13.9 | 17.0 |
| Jute & Mesta** | 10.6 | 11.7 | 11.3 | 11.2 | 10.5 |
| Sugarcane | 298.0 | 297.2 | 287.1 | 237.3 | 232.3 |

* Million bales of 170 kgs. each

** Million bales of 180 kgs. each

@ 4th advance estimates

Source: Economic Survey 2005-06

Table 9

Area and production of major horticultural crops

(Area-Million hectare, Production-Million tonnes)

| Crops | 2003-04 | | 2004-05* | | 2005-06 | |
|------------------|-----------------|-------|-----------------|-------|-----------------|-------|
| | Area Production | | Area Production | | Area Production | |
| Fruits | 4.8 | 49.2 | 5.0 | 53.1 | 5.2 | 57.6 |
| Vegetables | 5.9 | 84.8 | 6.1 | 91.6 | 6.3 | 99.4 |
| Spices | 2.4 | 3.8 | 2.5 | 4.1 | 2.6 | 4.4 |
| Plantation Crops | 3.1 | 13.1 | 3.2 | 14.1 | 3.3 | 15.3 |
| Flowers | 0.1 | 0.2 | 0.1 | 0.2 | 0.1 | 0.2 |
| Others | 0.9 | 0.9 | 0.9 | 1.0 | 1.0 | 1.1 |
| Total | 17.2 | 152.0 | 17.8 | 164.1 | 18.6 | 178.1 |

Source: National Horticulture Board. * Estimated

Table 10

Production and percapita availability of milk

| Year | Milk Production
(Million Tonnes) | Per capita
availability
(gms/day) | 2001-02 | 84.4 | 225 |
|---------|-------------------------------------|-----------------------------------------|-------------------------------------------------------------------|------|-----|
| | | | 2002-03 | 86.2 | 230 |
| | | | 2003-04 | 88.1 | 231 |
| | | | 2004-05 | 90.7 | 232 |
| 1990-91 | 53.9 | 176 | Source: Department of Animal Husbandry,
Dairying and Fisheries | | |
| 2000-01 | 80.6 | 220 | | | |

Table 11

1.9 Index Numbers of Agricultural Production

(Base: Triennium ending 1981-82 = 100)

| | Weight | 2000-01 | 2001-02 | 2002-03 | 2003-04 | 2004-05 |
|----------------|--------|---------|---------|---------|---------|---------|
| A. Foodgrains | 62.92 | 158.4 | 172.5 | 140.4 | 172.1 | 164.7 |
| a. Cereals | 54.98 | 165.5 | 178.5 | 144.9 | 175.7 | 169.6 |
| Rice | 29.74 | 170.9 | 187.7 | 144.4 | 177.5 | 171.5 |
| Wheat | 14.45 | 198.0 | 206.7 | 186.8 | 204.9 | 204.6 |
| Coarse Cereals | 10.79 | 107.2 | 115.2 | 90.0 | 131.8 | 117.3 |

| | | | | | | |
|----------------------|--------|-------|-------|-------|-------|-------|
| a. Pulses | 7.94 | 109.3 | 131.3 | 109.5 | 147.1 | 131.3 |
| Gram | 3.07 | 93.7 | 133.1 | 103.0 | 140.7 | 136.9 |
| Non-food grains | 37.08 | 178.2 | 189.5 | 167.2 | 196.0 | 203.7 |
| a. Oilseeds Total | 12.64 | 176.5 | 195.1 | 150.8 | 231.6 | 242.5 |
| Groundnut | 5.60 | 106.8 | 117.2 | 68.7 | 136.4 | 117.1 |
| Rapeseed and Mustard | 2.41 | 205.2 | 249.1 | 190.1 | 303.8 | 409.5 |
| b. Fibres | 5.09 | 126.6 | 133.8 | 117.5 | 177.3 | 211.8 |
| Cotton | 4.37 | 126.6 | 132.9 | 114.7 | 184.4 | 226.1 |
| Jute | 0.55 | 144.2 | 163.8 | 159.0 | 159.4 | 149.2 |
| Mesta | 0.14 | 72.5 | 64.0 | 58.6 | 54.3 | 49.9 |
| c. Plantation Crops | 2.29 | 209.0 | 208.9 | 208.9 | 208.9 | 208.9 |
| Tea | 1.46 | 151.3 | 151.1 | 151.1 | 151.1 | 151.1 |
| Coffee | 0.44 | 216.8 | 216.3 | 216.3 | 216.3 | 216.3 |
| Rubber | 0.39 | 416.1 | 416.8 | 416.8 | 416.8 | 416.8 |
| d. Others | | | | | | |
| Sugarcane | 8.11 | 189.4 | 190.2 | 183.9 | 151.9 | 148.7 |
| Tobacco | 1.12 | 71.8 | 113.6 | 102.4 | 102.4 | 102.4 |
| Potato | 2.09 | 241.5 | 256.9 | 248.7 | 248.7 | 248.7 |
| C. All Commodities | 100.00 | 165.7 | 178.8 | 150.4 | 181.0 | 179.2 |

Source: Economic Survey 2005-06

Table 12
Annual growth rate of industrial production

(Based on the index of industrial production)

Base 1993-94=100

(Percent)

| Period | Mining
& Quarrying | Manu-
facturing | Electri-
city | Overall |
|-----------|-----------------------|--------------------|------------------|---------|
| Weights | 10.47 | 79.36 | 10.17 | 100.00 |
| 1995-96 | 9.7 | 14.1 | 8.1 | 13.0 |
| 2000-01 | 2.8 | 5.3 | 4.0 | 5.0 |
| 2001-02 | 1.2 | 2.9 | 3.1 | 2.7 |
| 2002-2003 | 5.8 | 6.0 | 3.2 | 5.7 |
| 2003-04 | 5.2 | 7.4 | 5.1 | 7.0 |
| 2004-05 | 4.4 | 9.2 | 5.2 | 8.4 |
| 2004-05* | 5.1 | 9.2 | 6.4 | 8.6 |
| 2005-06* | 0.4 | 8.9 | 4.8 | 7.9 |

* (April-December)

Source: Economic Survey 2005-06

Table 13
Performance of manufacturing Industry Groups:
2005-06 (April-February)

| S.No. | Item | Percent |
|-------|-----------------------------------------|---------|
| 1 | Acceleration in Growth | |
| 1. | Other Manufacturing industries | 24.3 |
| 2. | Textiles Products including apparels | 12.2 |
| 3. | Beverages, tobacco and related products | 14.2 |
| 4. | Basic Metal and alloy industries | 14.7 |

| | | |
|---------------------------------|------------------------------------------------------------------------|------|
| 5. | Transport equipment and parts | 12.6 |
| 6. | Non-metallic mineral products | 10.2 |
| 7. | Cotton Textiles | 9.4 |
| 8. | Rubber, Plastic, Petroleum and Coal products | 4.3 |
| 9. | Food Products | 0.7 |
| II. | Deceleration in Growth | |
| 1. | Machinery and equipment other than transport equipment | 11.7 |
| 2. | Chemicals and chemical products | 8.5 |
| 3. | Jute and other vegetable fibre | 1.0 |
| 4. | Paper and paper products and printing publishing and allied activities | 0.6 |
| 5. | Wool, silk and man made fibre textiles | 0.5 |
| III | Negative Growth | |
| 1. | Metal products and parts (except machinery and equipment) | -1.3 |
| 2. | Leather and leather and fur products | -5.0 |
| 3. | Wood and wood products, furniture and fixtures | -5.6 |
| Source: RBI, Bulletin, May 2006 | | |

| Table 14 | | | | |
|--------------------------------------------------------------------------|---------|---------|---------|---------|
| Trends in growth of physical output infrastructure sectors (in per cent) | | | | |
| Items | 2001-02 | 2002-03 | 2003-04 | 2004-05 |
| I. Energy | | | | |
| 1. Coal production | 4.5 | 4.2 | 5.8 | 3.9 |
| 2. Electricity generated by utilities | 3.1 | 3.2 | 5.0 | 5.2 |
| a. Hydel | -0.7 | -13.7 | 15.6 | 14.5 |
| b. Thermal (including nuclear) | 2.5 | 6.2 | 3.6 | 3.8 |
| 3. Petroleum | | | | |
| a. Crude oil production | -1.2 | 3.2 | 1.0 | 1.8 |
| b. Refinery throughput | 3.7 | 4.9 | 8.2 | 4.3 |
| II. Steel | 4.6 | 9.9 | 9.8 | 6.5 |
| III. Cement 7.4 | 8.8 | 6.1 | 6.6 | |
| Average growth of I to III | 3.5 | 5.5 | 6.2 | 5.1 |
| IV. Transport and Communications | | | | |
| 1. Railway revenue-earning goods traffic | 4.0 | 5.3 | 7.5 | 8.0 |
| 2. Cargo handled at major ports | 2.3 | 9.0 | 10.0 | 11.3 |
| 3. Telecom New telephone connections | 23.9 | 21.5 | 40.1 | 28.5 |
| 4. Civil Aviation | | | | |
| a. Cargo handled | | | | |
| i. Export cargo handled | 4.1 | 13.3 | 1.0 | 12.6 |
| ii. Import cargo handled | -1.0 | 18.6 | 13.4 | 24.4 |
| b. Passengers handled at | | | | |
| i. International Terminals | -5.0 | 4.8 | 6.5 | 14.0 |
| ii. Domestic Terminals | -5.7 | 9.6 | 13.1 | 23.6 |
| Source: Economic Survey, 2005-06 | | | | |

Table 15
Growth of telephones over the years

| Sl. No. | Year | Fixed in million | | | Per cent of PSUs | Mobile in million | | | Per cent of PSUs |
|---------|-----------------------------|------------------|------|-------|------------------|-------------------|-------|-------|------------------|
| | | PSUs | Pvt. | Total | | PSUs | Pvt. | Total | |
| 1. | 2001-02 | 37.90 | 0.52 | 38.42 | 98.65 | 0.26 | 6.28 | 6.54 | 3.98 |
| 2. | 2002-03 | 40.53 | 1.10 | 41.63 | 97.36 | 2.64 | 10.35 | 12.99 | 20.32 |
| 3. | 2003-04 | 40.49 | 2.36 | 42.85 | 94.49 | 5.99 | 27.70 | 33.69 | 17.78 |
| 4. | 2004-05 | 41.11 | 5.09 | 46.20 | 88.98 | 10.97 | 41.20 | 52.17 | 21.03 |
| 5. | 2005-06
(first 9 months) | 40.70 | 7.01 | 47.71 | 85.31 | 16.48 | 61.60 | 78.08 | 21.11 |

PSUs & Public Sector units

Source: Economic Survey 2005-06

Table 16
Indicators of Service Sector Activity

Growth rates in per cent

| Sub-Sector | April-January
2004-05 | April-January
2005-06 |
|--------------------------------------------------|--------------------------|--------------------------|
| Tourist arrivals (April-February) | 23.7 | 11.7 |
| Commercial vehicles production (April-Dec.) | 32.3 | 9.7 |
| Railway revenue earning freight traffic | 7.8 | 10.4 |
| New cell phone connections | 17.1 | 68.0 |
| Cargo handled at major ports | 10.8 | 11.7 |
| Civil aviation | | |
| a. Export cargo handled | 12.4 | 7.3 |
| b. Import cargo handled | 28.6 | 13.5 |
| c. Passengers handled at international terminals | 15.6 | 12.8 |
| d. Passengers handled at domestic terminals | 25.3 | 22.9 |
| Roads: Upgradation of Highways | 19.0 | 20.9 |
| Cement (April-February) | 6.6 | 11.9 |
| Steel (April-February) | 7.5 | 5.3 |
| Aggregate deposits (end-March, year-on-year) | 14.8 | 16.9 |
| Non-food credit (end-March, year-on-year) | 28.8 | 30.8 |
| Central Government expenditure (April-February) | 5.6 | 1.7 |

Source: RBI Bulletin, May, 2006

Table 17
Balance of Payments: Summary

(In US \$ Million)

| | 2000-01 | 2001-02 | 2002-03 | 2003-04 | 2004-05 |
|---------------------|---------|---------|---------|---------|----------|
| 1. Exports | 45,452 | 44,703 | 53,774 | 66,285 | 82,150 |
| 2. Imports | 57,912 | 56,277 | 64,464 | 80,003 | 1,18,729 |
| of which POL | 15,650 | 14,000 | 17,640 | 20,569 | 29,844 |
| 3. Trade balance | -12,460 | -11,574 | -10,690 | -13,718 | -36,629 |
| 4. Invisibles (net) | 9,794 | 14,974 | 170,35 | 27,801 | 31,229 |
| Non factor services | 1,692 | 3,324 | 3,643 | 10,144 | 14,199 |
| Income | -5,004 | -4,206 | -3,446 | -4,505 | -3,814 |
| Pvt. transfers | 12,854 | 15,398 | 16,387 | 21,608 | 20,253 |
| Official transfers | 252 | 458 | 451 | 554 | 591 |

| | | | | | | |
|-----|-----------------------------------|--------|---------|---------|---------|---------|
| 5. | Current Account Balance | -2,666 | 3,400 | 6,345 | 14,083 | -5,400 |
| 6. | External assistance (net) | 410 | 1,117 | -3128 | -2858 | 1,923 |
| 7. | Commercial borrowing (net)@ | 4,303 | -1,585 | -1,692 | -2,925 | 5,040 |
| 8. | IMF (net) | -26 | 0 | 0 | 0 | 0 |
| 9. | NR deposits (net) | 2,316 | 2,754 | 2,978 | 3,642 | -964 |
| 10. | Rupee debt service | -617 | -519 | -474 | -376 | -417 |
| 11. | Foreign investment (net) of which | 5,862 | 6,686 | 4,161 | 13,744 | 12,147 |
| | i. FDI (net) | 3,272 | 4,734 | 3,217 | 2,388 | 3,240 |
| | ii. FII | 1,847 | 1,505 | 377 | 10,918 | 8,280 |
| | iii. Euro equities & others | 743 | 447 | 567 | 438 | 627 |
| 12. | Other flows (net)+ | -3,739 | -96 | 8,795 | 6,111 | 13,830 |
| 13. | Capital account total (net) | 8,509 | 8,357 | 10,640 | 17,338 | 31,559 |
| 14. | Reserve use (-increase) | -5,842 | -11,757 | -16,985 | -31,421 | -26,159 |

Source: Economic Survey, 2005-06

Table 18
Foreign Exchange Reserves

(US \$ Million)

| Year | Gold | RTP | SDRs | Foreign
Currency
Assets | Total |
|--------------------|-------|-------|------|-------------------------------|-----------|
| 1990-91 | 3,496 | - | 102 | 2,236 | 5,834 |
| 1995-96 | 4561 | - | 82 | 17,044 | 21,687 |
| 2000-01 | 2725 | - | 2 | 39,554 | 42,281 |
| 2001-02 | 3,047 | - | 10 | 51,049 | 54,106 |
| 2002-03 | 3,534 | 672 | 4 | 71,890 | 75,428* |
| 2003-04 | 4,198 | 1,311 | 2 | 1,07,448 | 1,12,959* |
| 2004-05 | 4,500 | 1,438 | 5 | 1,35,571 | 1,41,514* |
| 2005 -
November | 4,925 | 1,310 | 4 | 1,36,582 | 1,42,821* |

* Includes Reserve Tranche Position (RTP) in India

Source: Economic Survey, 2005-06

Table 19
Commodity composition of exports

| Commodity Group | Percentage Share
April-October | | Growth rate*
April-October | |
|-------------------------------------------|-----------------------------------|-------|-------------------------------|------|
| | 2004 | 2005 | 2004 | 2005 |
| i. Primary products | 14.8 | 16.1 | 39.7 | 17.0 |
| Agriculture & allied | 11.2 | 9.9 | 27.0 | 8.8 |
| Ores & minerals | 4.9 | 5.4 | 81.1 | 35.9 |
| ii. Manufactured goods | 74.1 | 72.4 | 20.2 | 20.5 |
| Textiles including
ready-made garments | 13.2 | 11.8 | 9.3 | 10.5 |
| Gems & jewellery | 17.4 | 17.9 | 20.8 | 26.9 |
| Engineering goods | 20.2 | 20.1 | 36.6 | 23.1 |
| Chemical & related
products | 11.8 | 11.1 | 30.1 | 15.9 |
| Leather & manufactures | 2.1 | 1.7 | 16.9 | 6.3 |
| Handicrafts | 0.5 | 0.5 | -19.6 | 11.6 |
| iii. Petroleum, crude & products | 8.7 | 11.1 | 89.4 | 57.7 |
| Total Exports (i+ii+iii) | 100.0 | 100.0 | 28.3 | 23.5 |

* In US \$ terms Source: Economic Survey, 2005-06

Table 20
Imports of principal commodities

| Commodity Group | Percentage Share | | Growth rate* | |
|--------------------------------------------|------------------|-------|---------------|-------|
| | April-October | | April-October | |
| | 2004 | 2005 | 2004 | 2005 |
| POL | | | | |
| Pearl, precious & semi-precious stones | 30.2 | 31.8 | 56.8 | 41.4 |
| Capital goods | 7.9 | 8.1 | 12.6 | 36.4 |
| Electronic goods | 9.6 | 10.3 | 23.3 | 44.2 |
| Gold & silver | 9.3 | 8.2 | 33.3 | 17.9 |
| Chemicals | 9.4 | 9.0 | 31.5 | 34.1 |
| Edible oils | 6.2 | 5.6 | 31.9 | 19.7 |
| Coke, coal and briquettes | 2.6 | 1.6 | -11.9 | -15.3 |
| Metaliferrous ores & metal scrap | 2.8 | 2.0 | 99.5 | -3.2 |
| Professional instruments and optical goods | 2.2 | 2.6 | 72.1 | 57.0 |
| Total Imports | 1.4 | 1.3 | 15.2 | 26.8 |
| * In US \$ terms | 100.0 | 100.0 | 36.9 | 34.3 |

Source: Economic Survey, 2005-06

Table 21
Inflation in terms of Wholesale Price Index since 1991-92

Based on 52-week average inflation rates

| Period ↓
Weights → | Annual average WPI Inflation (%) | | | |
|---------------------------------|----------------------------------|---------|------|--------------|
| | All Commodities | Primary | Fuel | Manufactured |
| 1991-92 to 1995-96 | 100 | 22.0 | 14.2 | 63.8 |
| 1996-97 to 2000-01 | 10.6 | 11.3 | 11.3 | 10.1 |
| 2001-02 to 2004-05 | 5.1 | 5.4 | 13.0 | 3.1 |
| 2005-06 as on 28.01.2006 | 4.7 | 3.7 | 7.7 | 4.1 |
| Source: Economic Survey, 2005-6 | 4.7 | 2.4 | 9.8 | 3.6 |

Table 22
Unemployment rates in India (NSS)

Current Daily Status (CDS) Definition

| Area | | 50th Round (1993-94) | | 56th Round (2004) | |
|----------|-------------|----------------------|------|-------------------|------|
| | | (Percent) | | (Percent) | |
| I Rural | i. Males | | 5.8 | | 9.0 |
| | ii. Females | | 5.5 | | 9.3 |
| II Urban | i. Males | | 5.7 | | 3.1 |
| | ii. Females | | 10.5 | | 11.7 |

Unemployment Rate: Percentage of unemployed to total labour force.

Source: Economic Survey, 2005-06

Table 23
Estimates of Incidence of Poverty in India

| Year | Poverty Ratio (Percent) | | | Number of poor million | | |
|----------------------------------|-------------------------|-------|----------|------------------------|-------|----------|
| | Rural | Urban | Combined | Rural | Urban | Combined |
| 1987-88 | | | | | | |
| 1993-94 | 39.1 | 38.2 | 33.9 | 231.9 | 152 | 383.9 |
| 1999-00 | 37.3 | 32.4 | 36.0 | 244.0 | 76.3 | 320.3 |
| Source: Economic Survey, 2003-04 | 27.1 | 23.6 | 26.1 | 193.2 | 67.1 | 260.3 |

Towards Agricultural Renewal and Renaissance

Dr. M.S. Swaminathan

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The year 1968 marked the beginning of the Green Revolution leading to quantum jumps in the productivity and production of wheat and rice. The last 10 years have witnessed a fatigue in the green revolution with the growth rate in foodgrain production falling below population growth. Thus, human numbers are increasing faster than our capacity to make the goal of food for all a reality. At the same time, consumption is not going up due to inadequate purchasing power at the household level. A famine of jobs / livelihoods as a result of poor growth of opportunities for employment in the rural non-farm and off-farm sectors is leading to a famine of food at the household level. According to the Union Planning Commission, we are off-track in achieving the UN Millennium Development Goal of reducing the number of hungry persons by half by 2015. Also, we are off-track in reducing infant and maternal mortality rates and in achieving universal primary education.

Doubling Productivity

Our Prime Minister has rightly emphasized the need to double annual foodgrain production from the present 210 million tonnes to 420 million tonnes within the next 10 years, i.e. by 2015, which is also a benchmark year for achieving the UN MDGs. This will call for producing at least 160 million tonnes of rice from 40 million ha and 100 million tonnes of wheat from 25 million ha. Pulses, oil seeds, maize and millets will have to contribute 160 million tonnes. In addition,

the national goal is to raise the production of vegetables and fruits to over 300 million tonnes by 2015. Since land is a shrinking resource for agriculture, the pathway for achieving these goals has to be higher productivity per units of arable land and irrigation water. Factor productivity will have to be doubled, if the cost of production is to be reasonable and the prices of our farm products are to be globally competitive. The average farm size is going down and nearly 80% of the farm families belong to the marginal and small farmer categories. Fortunately, the ownership of livestock is more egalitarian. Enhancing small farm productivity, and increasing small farm income through crop-livestock integrated production systems and multiple livelihood opportunities through agro-processing and biomass utilization, are essential both to meet food production targets and for reducing hunger, poverty and rural unemployment. Programmes designed to achieve these goals must be engendered, since there is increasing feminisation of agriculture, poverty and under-nutrition, as well as unfortunately HIV/AIDS.

Suicides among Farmers

The year 2005 was a difficult year both for the nation and for farm and fisher families. Beginning with the titanic tsunami of 26 December 2004 and ending with the disastrous earthquake in Kashmir and floods in Tamil Nadu, our farm and fisher families have been subjected to the fury of nature in the form of drought, unseasonal and heavy

ains (like the one which caused damage to the onion crop in Maharashtra) and floods. Institutional support to small farmers is weak. The same is true of post-harvest infrastructure. For example, even now paddy is being spread on the roads for drying in many places. The spoilage losses can be as high as 30% in the case of vegetables and fruits. Institutions, which are supposed to help farmers, such as research, extension, credit and input supply agencies, are by and large not pro-poor and pro-women. Mechanisms for risk mitigation are poor or absent. Hardly 10% of farmers are covered by crop insurance. Farm families are also not covered by health insurance. There is no Agricultural Risk Fund. Both risk mitigation and price stabilization are receiving inadequate policy support. The cost of production is invariably higher than the minimum support price, due to ever-increasing prices of diesel and other inputs. Investment in agriculture has suffered a decline over the past two decades. Capital formation in agriculture and allied sectors in relation to GDP started declining in the 1980s and is only now being reversed. This has adversely affected irrigation and rural infrastructure development. An unfortunate consequence of the constellation of hardships faced by small farm families is the growing number of suicides among farmers. The situation is particularly alarming in parts of Vidharba of Maharashtra State. To our shame, the suicide hotspots include Wardha district, where Mahatma Gandhi spent a significant part of his life, fighting for freedom from colonial rule, so that the country can be rid of hunger, poverty and gender injustice.

Year of Agricultural Renewal

The cost-risk-return structure of farming is becoming adverse. Consequently, indebtedness is growing in rural areas. In Maharashtra over 55% of the State's farm households are in debt. Average household size of farmers is 5.5 at the All India level. In the low-income

groups, the average size goes up to According to NSSO - 59th round, the average monthly per capita consumption expenditure of farm households across India was Rs.503 in 2003. Endemic hunger (i.e., chronic undernutrition), is high both in families without assets like land or livestock, as well as in families with small land holdings without access to irrigation. Policy reform in agriculture is thus overdue. Such policy reform should be pro-small farmer and pro-women and pro-landless agricultural labour. If we do not attend to the problems of small farm and landless agricultural labour families with a sense of urgency and commitment, the 'Indian Enigma' of the co-existence of enormous technological capability and entrepreneurship, on the one hand, and extensive under-nutrition, poverty and deprivation, on the other, will not only persist, but will lead to social dislocation, violence and increasing human insecurity. Without peace and security, economic progress will not be possible. The National Commission on Farmers has recommended that the agricultural year 2004-05 be designated the Year of Agricultural Renewal.

During 2004-05, an important policy measure should be introduced in every part of the country to increase both productivity and profitability in existing and new associated ecological farms. The policy should cover all the major agricultural crops and major agricultural regions. It should include the following: (i) increase in the price of the present agricultural products; (ii) conversion of the present agricultural products into other products; (iii) reversing the trend of the present agricultural products; (iv) agricultural products; (v) farm households; (vi) potential of the agricultural products; (vii) systemic changes; (viii) policy changes.

policies. The programmes initiated during the 2006-07: Year of Agricultural Renewal by Central and State Governments, Panchayati Raj institutions, Agricultural Renewal by Central and State Governments, Panchayati Raj institutions, Agricultural, Veterinary, Rural and Women's Universities and IITs, Private and Public Sector Industries, Civil Society Organisations and Mass Media should be designed to foster productivity, quality, sustainability, profitability and employment revolutions in the farm sector in all the over 600,000 villages in the country. It should help to promote job-led economic growth in our villages.

The following should be the major components of the Action Plan for the Year of Agricultural Renewal. All of them require concurrent and Integrated attention.

Soil Health Enhancement

Agricultural Universities, ICAR and CSIR Institutes, Krishi Vigyan Kendras, Fertilizer Companies, State Departments of Agriculture and Farmers' Associations and Panchayati Raj Institutions should commemorate 2006-07 as the Year of Soil Health Enhancement. The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) located at Hyderabad may be actively associated in this programme. ICRISAT has very valuable information on the soil health status in dry-farming areas, ICRISAT, CRIDA, CAZRI at Jodhpur and the National Bureau of Soil Survey and Land Use Planning of ICAR can provide technical support and assist in monitoring. The following steps need to be taken to launch a Soil Health Care movement in the country:

i. Re-tool and re-equip all Soil Testing Laboratories in order to enable them to provide each farm household with a Soil Health Card, which contains integrated information on the physics (soil structure, occurrence of hard pan in the subsoil, etc.), chemistry (soil organic

matter and macro-and micro-nutrient status), and microbiology (occurrence of earthworms, soil micro-organisms etc.) of the soils. The Soil Health Cards should stimulate balanced fertilization, including the amelioration of micro-nutrient deficiencies.

ii. Promote through campaigns and demonstrations, the introduction of fodder/ grain legumes in the crop rotations as also the cultivation of green and green-leaf manure crops.

iii. Composting of all agricultural residues and wastes and the use of microbial fertilizers and farmyard manure should be promoted to the maximum extent possible.

iv. Methods of improving soil health through integrated nutrient supply will have to be prescribed and farmers should be assisted to adopt the recommendations.

v. All staff working in Soil Testing Laboratories should be retrained.

vi. Integrated wasteland and biofuels programme should be promoted.

vii. The Agri-clinics programme should be restructured and revitalized and farm graduates should be encouraged to take to a career of self-employment in the rural services sector.

viii. Breeding soils for higher productivity may be undertaken in the case of problem soils and wastelands.

ix. Wasteland development could be linked to the production of biofuel and industrial raw material (for the production of paper and board, rayon, packaging material etc.) as well as fodder, firewood etc.

x. Community Land Care movements may be launched by Panchayats.

Soil Health Enhancement holds the key of improving the return from investment in other inputs like seeds and water. Dry-farming areas need particular attention from the point of view of overcoming micro-and macro-nutrient deficiencies. The new green revolution has to begin in rainfed areas. The Government of India has announced that it is setting up a

National Rainfed Area Authority for this purpose.

More Crops per Drop of Water

Irrigation Water: Supply Augmentation and Demand Management: Water is a public good and a social resource and not private property. The privatization of water supply distribution is fraught with dangers and could lead to water wars in local communities. Increasing supply through rainwater harvesting and recharge of the aquifer should become mandatory. In addition, a nationally debated and accepted strategy for bringing 10 million hectares of new area under irrigation under the Bharat Nirman programme should be developed. The Polavaram Project to be built across the Godavari in Andhra Pradesh is a case in point. Different viewpoints can be reconciled only by dialogue and consensus building. All existing wells and ponds should be renovated. Demand Management through improved irrigation practices, including sprinkler and drip irrigation, should receive priority attention. A Water Literacy movement should be launched and regulations should be developed for the sustainable use of ground water. Seawater farming should be promoted in coastal areas through the cultivation of mangroves, salicornia, casuarina and appropriate halophytic plants. The conjunctive use of rain, river, ground, sea and treated sewage water should become the principal method for the effective use of available water resources. In water scarce areas, the land use system should place emphasis on the cultivation of high value - low water requiring crop, such as pulses and oilseeds. Pulses and oil seed villages can be promoted where all farmers work together in harvesting rainwater and sharing the water equitably for growing pulses and oilseeds. Promotion of "Hybrid arhar (pigeon pea) villages" can be the starting point of a pulses revolution. In paddy and sugarcane, water saving methods of cultivation like those

inherent in the "System of Rice Intensification" (SRI) methodology should be perfected and popularized. More crops per drop of water should not remain just a slogan. Land use decisions are also water use decisions. Hence, the choice of cropping systems should be based on irrigation water availability including rainfall pattern. Watershed management should be linked to the different Technology Missions as emphasized in our earlier reports, so that the concurrent availability of water and of the other inputs like seeds needed to optimize the benefit from irrigation water can be ensured. Low cost green houses can be promoted in areas where evaporation exceeds precipitation during many months in a year. Panchayats may be assisted in launching water literacy and water quality management programmes.

Credit and Insurance

Credit reform should consist of the following measures:

i. Interest rate on agricultural loans: The spread between the deposit and lending interest rates in India is high by international standards. The need is to improve the efficiency in the financial intermediation by controlling both the transaction cost and the risk cost. On the part of the Government, crop insurance as well as the speed and manner in which the debt recovery and settlement process operates would need to be considerably improved. These improvements could be brought about in the medium to long term. A high interest rate means that a greater proportion of income has to be diverted to interest payment. Keeping in view the decline in the profitability of agriculture, and increasing farmers' distress and indebtedness, the government may consider providing support to the banking system for reducing the rate of interest for crop loans to 4% during the Year of Agricultural Renewal.

ii. Compounding of interest on arrears
The Compounding of interest on arrears

be applied only in the case of recalcitrant borrowers who do not pay the due in spite of having adequate repaying capacity. The farmers facing erosion in income and consequently their repaying capacity due to market failure should not be charged compound interest on arrears.

From micro finance to livelihood finance

iii. There is an urgent need for a paradigm shift from micro-finance to livelihood finance, as the access of the poor to micro-finance alone is not likely to alleviate their poverty. Livelihood finance is a comprehensive approach to promoting sustainable livelihoods for the poor, which includes financial services, [including insurance for life, health, crops and livestock; infrastructure finance for roads, power, market, telecom etc. and investment in human development], agriculture and business development services [including productivity enhancement, local value addition, alternate market linkages etc.] and institutional development services [forming and strengthening various producers' organisations, such as SHGs, water user associations, forest protection committees, credit & commodity cooperative empowering Panchayats through capacity building and knowledge centres etc.

iv. Access to institutional credit in poverty stricken tribal areas: Special efforts are required to improve the access to institutional credit in the poverty stricken tribal areas in the dry land agriculture regions like the Kalahandi belt of Orissa / palamau region of Jharkhand / tribal areas of Chhattisgarh/ Madhya Pradesh/ Andhra Pradesh and the Vidharba region of Maharashtra.

v. Agri-risk Fund: There are areas in our country, which have recurrent and frequent drought/floods etc., which cripple the incomes of the farmers. These farmers become defaulters to the banks and thereby become 'push-outs' of the credit system. Rescheduling

and restructuring of their loans are not enough in the event of successive natural calamities. The government of India may step into to create an Agricultural-Risk Fund to provide relief [waiver in full / part of loan and interest] to the farmers in the case of successive droughts, etc. and also waiver of interest on loans in areas hit by droughts, floods, heavy pest infestation etc. This Fund should have contributions from the Central Government, State Governments and Banks in a predetermined fashion.

vi. Distress 'hot spots' - moratorium on debt recovery: There is a need for moratorium on debt recovery including loans from non-institutional sources in distress hotspots, till reasonable profit margins in agriculture operations are restored. The debt recovery may be staggered in easy installments. For this purpose, liquidity support may have to be provided to the localised banks like the RRBs/ Cooperative Banks etc.

vii. Credit for low cost/sustainable agriculture: There is need for developing suitable project profiles for low input sustainable agriculture and aquaculture. Institutional credit should also be available for viable projects of sustainable farming practices including the upkeep of traditional breeds of cattle .

viii. Issue of Kisan Credit Card to Women farmers: The Kisan Credit Card (KCC) is a major innovation in agricultural credit. However, in spite of nearly 4.5 crore KCCs issued by the banks, very few cards have been issued to women farmers. As a matter of fact, no separate data are available in this regard. Keeping in view the fact that there are a very large number of women-headed farming families, particularly in the hills and NE Region, special effort is needed to issue KCC to these farmers. The banks may develop proper documentation systems to issue KCCs to women where the land is in the name of the menfolk who do not reside in the rural area [jobs in the

cities/army etc.] or face similar other situation and the land is cultivated by the wife.

ix. Distress sale - need for pledge loans: Distress sale by small / marginal farmers to square off their debts or for immediate consumption purposes soon after harvest is quite common. According to the Report of the Inter-Ministerial Task Force on Agricultural Marketing Reforms, micro-level studies reveal that about 50% of the marketable surplus of small/marginal farmers is disposed off in distress sale. It is normal for a farmer to get 10-15% discounted price for spot payment for his produce. Pledge loans to farmers need to be liberalised and encouraged to help the farmers to overcome this problem.

x. Credit business potential in marketing Infrastructure: The banking system needs to develop credit potential of financing projects for improving/modernization of markets, storage including cold storage facilities, rural based transport operators, etc.

xi. Pariwar Bima Policy: An integrated micro insurance policy providing floating cover for various risks i.e., hospitalisation of husband, wife and dependents, natural death, accidental death, permanent partial disability and loss/damage to dwelling unit etc., may be introduced with government support for the poor. The Panchayats and NGOs/Self Help Groups could be the delivery arrangement for reaching a large number of clients. The government may meet a part of the premium cost as a life saving support towards a safety net for the poor.

xiii. Rural Insurance Development Fund: A Rural Insurance Development Fund may be created to take up development work for spreading rural insurance.

xiv. Crop Insurance: Crop insurance is covering about 14% of the farmers. The need is to expand the cover to all farmers and all crops in a time bound manner. The scheme needs to be made more farmer friendly and the premium reduced.

xv. Establish Credit Counseling Centres where severely indebted farmers can be provided with a debt rescue package of information in order to get them out of the debt trap, and thereby save them from committing suicide.

xvi. Establish in every block a Self-help Group Capacity Building and Mentoring Centre in order to equip members and managers of SHGs with the needed management, marketing and accounting expertise. The use of Kisan Call Centres needs to be popularized.

xvii. Develop and introduce an integrated credit-cum-crop-livestock-human health insurance package.

xviii. Promote credit and insurance literacy through the Every Village Knowledge Centre movement. For this purpose, introduce policies for more extensive use of Community Radio linked to the internet / cell phone.

Stress on Technology

Technology is the prime mover of change. Both technology fatigue and technology gap should be avoided. This will call for revitalization of research, education and extension systems. It is suggested that all ICAR institutions and Agricultural Universities may commemorate 2006-07 as the Agricultural Technology Year. The major aim of this year should be to strengthen participatory research and knowledge management with farming families and the organization of about 60,000 Lab to Land programmes in the area of post-harvest technology and value addition to primary products. Farm schools should be established in the fields of farmer-scientists in order to foster farmer to farmer learning of new technologies.

Agricultural Technology 2006-07 should be celebrated as the Agricultural Technology Year. The major aim of this year should be to strengthen participatory research and knowledge management with farming families and the organization of about 60,000 Lab to Land programmes in the area of post-harvest technology and value addition to primary products. Farm schools should be established in the fields of farmer-scientists in order to foster farmer to farmer learning of new technologies.

should be to enhance income per hectare on an environmentally sustainable basis.

There should be a proper match between production and post-harvest technologies and a post-harvest technology wing should be added to every Krishi Vigyan Kendra. Also, Lab to Land demonstrations should include post-harvest technology. About 60,000 lab to land demonstrations may be organized in the area of post-harvest handling, processing and value addition during 2006-07 to mark the 60th anniversary of our independence. Many of them should be organized in dry-farming areas, where millets, pulses, oilseeds and cotton are grown. The help of CSIR and the Central Food Technology Research Institute (CFTRI), Mysore should be taken by ICAR while designing the Lab to Land programme. The demonstration should be so designed that they also serve as training ground.

For landless agricultural labour (both women and men), the aim should be to convert them into skilled workers, thereby adding economic value to their time and labour. The training should be in skills which can help in organizing market driven enterprises and the training methodology should be based on the principle of learning by doing.

Management procedures which can confer the economy and power of scale to small and marginal farm families, such as Small Holders' Cotton and Horticulture Estates should be popularized. In such estates, production and biomass utilization can receive concurrent attention. Average farm size is going down steeply, and Farmers' SHGs in the form of joint management units like the Cotton, Horticulture, Aquaculture and other Estates are urgently needed. The SHG movement should cover both the production and post-harvest phases of farming.

Value addition to biomass will help to generate skilled jobs. Rice occupies the largest

area in the country and the opportunities for generating more jobs and income by establishing Rice BioParks. Similarly, eco-boards can be produced from cotton stalks.

There should be a pro-nature, pro-poor and pro-woman orientation to technology development and dissemination. Organic Farming and Low External Input Sustainable Agriculture (LEISA) techniques should be promoted along with Integrated Natural Resource Management and Integrated Pest Management (IPM) techniques. The role of women, both as farmers and farm labour is critical for the success of eco-farming practices. Hence, all programmes designed to foster access to technologies must be gender sensitive.

Agricultural and Rural Universities, Home Science colleges and Research Institutes should foster participatory research and knowledge management systems with farm women and men. They should identify farm families from whom other farmers can learn (land to land transfer of technology). Farm Schools should be established in the fields of such farmer-achievers as recommended in the first report of NCF.

Scientist - Panchayat Linkage

New technologies like biotechnology (BT) and Information, Communication Technology (ICT) should be demystified and a cadre of Rural Farm Science Managers should be developed by training a couple of women and men members of every Panchayat / local body in the management of new technologies, such as the establishment of refugia in Bt Cotton fields and the detection of spurious seeds by using the Bt detection kit developed by the Central Institute for Cotton Research, Nagpur. Under the 73rd Constitution Amendment, the responsibility of Panchayats includes agriculture and agriculture extension. Therefore, a Scientist-Panchayat linkage is the need of the hour.

Genome Clubs may be organized in village schools and KVKs to spread genetic literacy. Illegal release of genetically engineered crop varieties like Bt Cotton should be stopped. Spurious seeds will ruin the spread of useful technologies.

Inputs are needed for output. Hence, the right inputs should be available at the right time and place at affordable costs. Input supply systems should become farmer-friendly and also controlled by Farmer Self Help Groups to the extent possible. Quality standards should be enforced. The package of technology to be effective must be accompanied by an appropriate package of services in the areas of extension and input supply.

Energy is a key input. The energy sources needed by farm families, both electricity and diesel, should be available in a reliable manner and at affordable price. In addition, solar energy could be tapped where economical. There should be a Panchayat-led integrated energy generation and management movement.

ICT should be effectively harnessed to empower rural men and women through the Every Village a Knowledge Centre Movement with farming system and season specific information.

Market Reforms

Ultimately, it is only opportunities for assured and remunerative marketing that will determine the economic viability of farming both as a way of life and a means to livelihood. Market reform should begin with production planning, so that every link in the cultivation-consumption-commerce chain receives adequate and timely attention.

The existing State Land Use Boards are not equipped to provide proactive advice to farmers on land use planning. There is an urgent need for a National Land Use Advisory Service, linked to State and Block Level Land

Use Advisory Services on a hub and spokes model. These can be virtual organisations with the capacity to link land use decisions with ecological, meteorological and marketing factors on a location and season specific basis. The National Land Use Advisory Service can be linked to the proposed Indian Trade Organisation (ITO) as described later. It should have continuous contact with IMD, ISRO, Agricultural Universities and Departments, Commodity Exchanges and Futures Markets, APEDA, Commodity Boards and all credible national and international sources of information on domestic and international markets. The Land Use Advisory Service should cover crop and animal husbandry, horticulture, inland fisheries, forestry and agro-forestry, and have the capacity to proactively assess potential surpluses and shortages of essential commodities.

The State and Block level Land Use Advisory Service Organisations should have appropriate linkages to data providers at the State and local levels. The Block level Advisory Service can be located in the ISRO supported Village Resource Centres under the Mission 2007: Every Village a Knowledge Centre Movement.

Land use advice should be based on the quantity and quality of the available irrigation water and temperature. The National and State Level Land Use Advisory Service should also monitor the state of crops and issue timely warning on emergent surpluses and shortages. If this is done, situations like the recent onion shortage crisis can be avoided. Without economically and ecologically sound and proactive advice on land and water use, farmers will have to fend for themselves in taking decisions on what to grow. With the spread of agricultural globalisation, this can be disastrous to the economic health of farmers.

Thus, the National Agricultural Extension
Year Programme of 2006-07 should

concurrent with soil health enhancement, augmentation of the area under irrigation coupled with efficiency and equity in water use, credit and insurance reform, technology upgradation and dissemination, and farmer-centered marketing. The aim of the Agricultural Renewal Programme will be enhanced productivity per units of arable land and irrigation water, higher profitability, increased on-farm and off-farm employment opportunities and long-term environmental sustainability. Distress hot spots should receive priority attention.

In a globalised economy, we should develop appropriate institutional instruments and policies to safeguard the livelihood security of nearly 70% of our population who depend on crop and animal husbandry, inland and marine fisheries, forestry and agroforestry and agro-processing for their work and income security. Risk Mitigation and Price Stabilization Funds will be needed. All Technology Missions and the Small Farmers' Agri-business Consortium (SFAC) should be restructured under competent professional management. Each Mission should have measurable time-bound goals. The Mission Director, an eminent professional, should be in position at least for a period of 5 years.

Farmers need appropriate institutional support to enhance their agricultural competitiveness. Institutional support to confer on small farm families the power and economy of scale is vital to enhance the productivity and profitability of small farms. Multiple livelihood opportunities are essential for ensuring the income security of resource-poor farming families, particularly in rainfed semi-arid, arid and hill regions. Mixed farming and improved post-harvest technology leading to value addition to primary products can help to achieve this goal.

An Indian Trade Organisation

The Union Minister for Commerce and Industry and the Government of India have done a commendable job in safeguarding the

interests of our farm women and men in the recent negotiations at Hong Kong. They have put together a broad-based coalition of the concerned. Postponement of agreement in agricultural negotiations will however prolong the unequal trade bargain entered into at Marrakesh in 1994. As a national self-empowerment measure, we should consider establishing an Indian Trade Organisation (ITO) and our own boxes for domestic agricultural support on the model of WTO's Blue, Green and Amber Boxes. The value of our annual agricultural production including livestock in 2002-03 was Rs.5,60,516 crore¹. The value of our exports of farm commodities in 2002-03 was Rs.34,654 crores (6.18% of total agricultural production)². Thus only a small proportion of our agricultural commodities enter the global market, since with a population of over a billion, there is a large home market. Hence, we must segregate the very modest support we extend to our farmers into two groups - those which are of the nature of life and livelihood saving support to small farm families, and those which could be considered as trade distorting in the global market. The Indian Trade Organisation (ITO) can be virtual organisation, specializing in WTO affairs. It can serve as a brain and information bank for enabling Government to take informed and proactive decisions. It can provide timely advice on potential surpluses and shortages in major agricultural commodities, by maintaining a trade watch. The Indian Trade Organisations should serve as a friend and guide to small farm families and should provide proactive advice on land use and crop planning. The ITO will help to build a long-term memory system in relation to home and external trade and help checkmate adverse global trade trends by stimulating timely national action.

Knowledge Connectivity

Knowledge Connectivity should become

fundamental to physical connectivity under the Bharat Nirman programme. The revised Bharat Nirman document contains the following statement regarding Knowledge Connectivity.

"The Government is committed to expanding rural connectivity through a slew of measures so that rural users can access information of value and transact business. This will include connecting block headquarters with fiber optic network, using wireless technology to achieve last mile connectivity and operating information kiosks through a partnership of citizens, Panchayats, Civil Society Organisations, the Private sector and Government."

The National Alliance for Mission 2007: Every Village a knowledge Centre facilitated by NCF provides a platform for partnership for achieving the goal of knowledge connectivity under Bharat Nirman. It is essential that Government reviews its policy towards Community Radio, since a combination of the Internet /cell phone and community radio will help to take timely information to farmers even in the remotest parts of the country. The last mile and last person connectivity can be achieved only through a combination of internet and either cell phone or FM radio.

In 1995, the Supreme Court of India ruled, "airwaves or frequencies are public property". The principle is the same as for seawater enshrined in the immortal Dandi March of Mahatma Gandhi. A successful merger of tele-centre technologies and the radio will help to usher in an era of knowledge revolution in rural India. Efficient disaster management and mitigation will be greatly facilitated by such a step. We therefore recommend that Village Knowledge Centres (VKC) may be permitted to apply for a community radio license. The eligible organisations should also include Gram Sabhas Cooperatives, ICT-Self Help Groups

promoted by NABARD, NGOs and Educational Institutions.

In an era of globalisation and bottom-up approaches to development, Community Radio can act as an important medium in strengthening grassroots and mainstream linkages, act as a true people's medium and contribute towards creating a vibrant, aware and informed community, the hallmark of a true democracy. As one of the signatories to the process of the World Summit on Information Society, India is committed to ensure a political atmosphere that enables the creation of a "people-centred, inclusive and development oriented Information Society, where everyone can create, access, utilize and share information and knowledge." Extending to the citizens of India, a right over airwaves would be an essential measure in both these regards.

A Community Radio Station attached to VKCs may be permitted to cover an area of approximately 110 kilometers radius. In the case of hilly areas as well as fishing zones in oceans, a wider coverage will be needed. Broadcasting using transmitters upto half a watt should be delicensed. The Community Radio license should follow the programme and commercial codes of the All India Radio. A forward-looking Community Radio Policy which will be in keeping with the spirit of the Right to Information Act is the need of the hour. Knowledge and skill empowerment of farm families is essential for achieving the goals of the Year of Agricultural Renewal.

Overall economic growth rates have had meaning if we do not look after the economic health and survival of over 60% of the population. The programme covered by this article can help to launch the country on the path of an ever-green revolution in agriculture characterized by sustainable improvements in productivity without ecological harm.

Banking

Banking in India has its origin as early as the Vedic period. It is believed that the transition from money lending to banking must have occurred even before Manu, the great Hindu Jurist, who has devoted a section of his work to deposits and advances and laid down rules relating to rates of interest. During the Mogul period, the indigenous bankers played a very important role in lending money and financing foreign trade and commerce. During the days of the East India Company, it was the turn of the agency houses to carry on the banking business. The General Bank of India was the first Joint Stock Bank to be established in the year 1786. The others which followed were the Bank of Hindustan and the Bengal Bank. The Bank of Hindustan is reported to have continued till 1906 while the other two failed in the meantime. In the first half of the 19th century the East India Company established three banks; the Bank of Bengal in 1809, the Bank of Bombay in 1840 and the Bank of Madras in 1843. These three banks also known as Presidency Banks, were Independent units and functioned well. These three banks were amalgamated in 1920 and a new bank, the Imperial Bank of India was established on 27th January 1921. With the passing of the State Bank of India Act in 1955 the undertaking of the Imperial Bank of India was taken over by the newly constituted State Bank of India. The Reserve Bank which is the Central Bank was created in 1935 by passing Reserve Bank of India Act 1934. In the wake of the Swadeshi Movement, a number of banks with Indian Management were established in the country namely, Punjab National Bank

Ltd., Bank of India Ltd., Canara Bank Ltd., Indian Bank Ltd., The Bank of Baroda Ltd., The Central Bank of India Ltd. On July 19, 1969, 14 major banks of the country were nationalised and on 15th April 1980 six more commercial private sector banks were also taken over by the government. Today the commercial banking system in India may be distinguished into

Public Sector Banks

- a. State Bank of India and its associate banks called the State Bank group
- b. 20 nationalised banks
- c. Regional Rural Banks mainly sponsored by Public Sector Banks

Private Sector Banks

- a. Old generation private banks
- b. New generation private banks
- c. Foreign banks in India
- d. Scheduled Co-operative banks
- e. Non-Scheduled banks

Co-operative Sector

The Co-operative banking sector has been developed in the country to supplement the village money lender. The co-operative banking sector in India is divided into 4 components.

1. State Co-operative Banks
2. Central Co-operative Banks
3. Primary Agriculture Credit Societies
4. Land Development Banks
5. Urban Co-operative Banks
6. Primary Agricultural Development Banks
7. Primary Land Development Banks
8. State Land Development Banks

Development Banks

1. Industrial Finance Corporation of India (IFCI)

Stock Market, 2006-07: Outlook and Strategy

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Indian stock markets drew more attention in 2006 with an unusual fluctuation that saw confidence levels dipping to new lows. While 2006 began with the Bombay Stock Exchange Sensitive Index (Sensex) nearing a new milestone, having crossed 10,000 points, many experts were quick to question the sustainable nature of such a growth. Fundamentally strong, the economy was the key driver but rising interest rates and soaring global crude oil prices applied brakes on its acceleration.

Closer to 2006, many leading investment bankers had raised issues like a high current account deficit, then close to a 15-year high of 2.2% of GDP to widen further and mar the party. A slowing capital inflow was already putting stress on Indian rupee. At this juncture, a firm domestic demand for oil was inflating its oil import bill. Though stock markets were on an upswing, these issues were boiling in the background. In fact, fundamentals such as favourable long term demographics, strong corporate fundamentals, better liquidity that helped consumption and private sector growth and a solid GDP growth trajectory of 6-8% drew investments into India, which remains a domestic-demand driven economy.

Beginning of 2006 calendar year, Sensex valuations were a reasonable at a multiple of 13. Compared to emerging markets like Russia and Brazil, India looked well in line or at times slightly overpriced. The P/E multiple and real earnings growth were easily the highest. Indian retail investors in general remained

underinvested in equities and the bullishness in indices attracted them more to the market. There were many growth sectors that seem richly valued while there were many sectors such as banking, IT and mining as overweight in many portfolios.

However, Sensex continued its upward journey for 2006 despite facts being loaded against it. In May, the seemingly endless journey was cut short as the month proved yet again to be the nemesis of markets. What seemed as a reaction to a CBDT circular on taxing the FIs, the Indian markets felt the heat as a selling frenzy began. Trading had to be suspended following an unprecedented selling pressure. From a peak of 12,000 points, Sensex crashed below 9,000 as many investors, who had created long positions, sold to cut down losses. It once again showed the immaturity of Indian investors who now began talking about 'Bear' market and the need to get of out it.

FIs who were struggling to reduce losses in emerging markets and mutual funds who saw large redemptions were net sellers. Many dubbed this as a sign of foreign investors deserting India. Statistically speaking, net selling by institutional funds (with a total asset size \$26bn) was far higher at \$556 million in April 2006, the highest since 1995. Both emerging market funds and country funds sold heavily. They improved this record in May by selling equities worth \$753 million. However, the May 2006 correction was crucial as the BSE Sensex went down 15% in just 7 trading days to take away much of the

criticism that it was overvalued and overrated. This helped most analysts to maintain a positive stance on the Indian economy. Meanwhile, India's six core industries clocked a growth of 8.8% as industrial production rose to 7.7%.

After the mayhem, sanity returned. As volatility remained above surface, investors calmed down to take stock of the situation. Many realized that markets were attractive enough to buy since the PE multiples were attractive and there was much value left in many stocks. As noted earlier, among Asian emerging markets, India was one of the most undervalued markets till 2003-04, a status it changed during the last year. However, the May 2006 correction has changed the equation to India now being labeled as a market with a very small premium. The series of corrections also acted tempting for larger investors. Since June and July 2006, good corporate results and a stable economic environment have been helping markets to be stable at the present levels. From May levels, the markets have slowly pulled back to around 11,700 levels in Sensex due to steady investments.

Amid this, there are concerns over tight global liquidity and deteriorating trade balance. These may not check India's strong economic growth, say analysts. As India is getting younger and younger, its productivity bounds to rise. The dramatic multiplier effect on our consumption and subsequently on economic growth is tremendous. The per capita income, currently at \$750, promises to reach \$1,000 in another 8 years time.

But going forward, are these secular trends priced appropriately? Analysts react positively. Investments in Indian markets must be seen in marginally a different context. As much as 60% of the GDP is led by domestic consumption whereas others emerging countries are dependent on foreign markets. Indian corporates have been systematically improv-

ing their records in terms of return on equity, corporate governance, various benchmarking and overall competitiveness to stay above the rest. This makes them more attractive.

For the next few months ending the financial year 2007, sectors like FMCG, pharma, retail, media and textiles look attractive in terms of valuations. But let us take a further view on some of the areas where investment would be meaningful. Basically, India, a service driven growth story, has much to offer since we are in the middle of a capital expenditure boom and rapidly expanding outsourcing. Hence Indian companies having bases in domestic consumption story, banking, capital goods and global footprints are worth investing. The rural India is slowly emerging as a force to reckon with in financial sector, FMCG and other basic services such as telecom and aviation sectors focusing on it. It's an untapped and sleeping giant out there. Infrastructure companies offer tremendous value story since rural and urban India is craving for more roads and power. As of now, the year ahead looks stable unless oil prices create further havoc and inflation goes out of control.

Analysts say that it's ironic enough to rate India as a safe haven during any global slowdown. A country with least dependence on global trade, India exports services and projects crucial to global companies. The country continues to sustain the lead in terms of manpower cost and volumes. An abundant supply of young manpower is a credential seldom one can boast of. India's growth will be sustained and may reach greater levels if the government acts on reforms front. Infrastructure, agriculture, taxation and labour laws need immediate attention. Large investments are required for SEZs, ports, airports, roads and irrigation. Meanwhile, more investments are required to education, health and legal system.

As of now, India remains in focus for the next three years for many funds who are country centric. Top of the list are India country funds, which sustain high cash levels for India investments. Their calculation is that immediate uncertainties that weighed the Indian markets are over. Interest rate hikes seem to have reached finishing line since inflation is now under control. Any fear of a weak monsoon was far fetched as most of the country received excess rainfall, often resulting in floods. Critically, this year, the agriculture is expected to make a significant and a positive contribution to GDP growth.

If you are looking to invest in India in 2007, there is no better time than now. The country has survived the worst since May 2006, more importantly it escaped the massive capital outflows from emerging markets, and still looks very promising in terms of valuation. As analysts noted, even the Indian derivative markets are about to buck the pessimist overtone.

At present, going by the key fundamentals, most experts believe that for next 6-8 months, there is very limited downside risk at the current levels. So go ahead and pick up your choicest blue chips and lot more of mid-caps because these are quite attractive now.

According to a Morgan Stanley report, technically speaking towards third quarter of 2006-07, an intermediate rally is expected and that would sustain the Sensex to reach 14,700 points by June 2007. As it noted, India had been the best performer in the emerging markets rally so far giving a handsome return of 45.6%, in US dollar terms, followed by Indonesia. The research further said that India was amongst the cheapest Asian emerging markets both on trailing and prospective terms. If India is ranked the second most volatile market after Korea, it has also delivered a 7% CAGR (in US dollar-terms) for the last 15 years. In short, it is the second best performing Asian emerging market.

Commodity Market

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For those who want to diversify their portfolios beyond shares, bonds and real estate, investment in commodities can be a good option. Commodities have the potential to become a separate asset class for market-savvy investors, arbitrageurs and speculators.

In many ways, Commodity markets operate just like public market places or auctions. For instance, prices of commodities on an exchange are determined solely by supply and demand conditions, which is no different from the way in which prices are determined in more familiar markets. In addition, commodity margins are

analogous to the down payment one generally makes in connection with a real estate transaction. Once certain facts are understood, one can see that commodity markets are an integral part of a well-run economy.

The primary distinction between a futures market and a market in which actual commodities are bought and sold, either for immediate or later delivery, is that in the futures market one deals in standardized contractual agreements only. These agreements (more formally called futures contracts) provide for delivery of a specified

amount of a particular commodity during a specified future month, but involve no immediate transfer of ownership of the commodity involved.

The purpose of a commodity exchange is to provide an organized marketplace in which members can freely buy and sell various commodities in which they have an interest. The exchange itself does not operate for profit. It merely provides the facilities and ground rules for its members to trade in commodity futures, and for non-members also to trade by dealing through a member broker and paying a brokerage commission.

Indian Scenario

Commodity markets in India are still in their initial stages of development. The essential contributors of this scenario include stringent regulatory restrictions, intermediate ban on commodity trading and policy interventions by the government. To increase the efficiency of the markets the Forward Markets Commission (FMC), the governing body of commodities trading in India, has taken several initiatives for the establishment of national level multi-commodity exchanges in India.

These exchanges serve as platforms for facilitating transparent trading, trading in multiple commodities, electronic delivery systems and efficient regulatory mechanisms, creating a world class environment for Indian traders. In order to sustain the increasing volumes in commodities trade, the need for proper clearing and settlement systems, warehousing facilities and efficient pricing mechanisms has been identified. With the recent boom in commodities markets, Indian participants are gearing up for exploiting the potential opportunities in the future.

The major commodity markets are in the United Kingdom and in the USA. In India there are 25 recognised future ex-

changes, of which there are three national level multi-commodity exchanges. After a gap of almost three decades, Government of India has allowed forward transactions in commodities through Online Commodity Exchanges, a modification of traditional business known as Adhat and Vayda Vyapar to facilitate better risk coverage and delivery of commodities. The three exchanges are:

- * National Commodity & Derivatives Exchange Limited (NCDEX)

- * Multi Commodity Exchange of India Limited (MCX)

- * National Multi-Commodity Exchange of India Limited (NMCEIL)

All the exchanges have been set up under overall control of Forward Market Commission (FMC) of Government of India. Commodity markets are of great help not only for their participants but also the economy as a whole. The twenty year bear market for commodities has drastically reduced the prices of many commodities to their lowest levels. The present shift in trend in commodity trading complemented by the global increase in demand will certainly hold a promising future for the investments in this segment.

Universal Scenario

Secular decline and variability in agricultural commodity prices continue to be matters of concern, not only for those developing countries dependent on commodity export earnings, especially from tropical crops, but also for those developing countries increasingly reliant on food imports for their food security. Secular relative decline in agricultural commodity prices is expected as technological progress reduces costs and induces supply expansion at a faster rate than population and income growth expand demand.

The price inelastic demand for agricultural commodities means that

prices lead to lower export earnings for developing country exporters. Many developing countries, and especially certain least developed countries, remain dependent for a significant share of their export earnings on one or a few agricultural exports. The

impact of world commodity price variability on producers and consumers and the effectiveness of price signals in bringing about adjustments in supply and demand depend on the extent to which world market prices are transmitted to domestic markets. ■

The Millennium Development Goals and Indian Women — Promises to keep, miles to go

Ammu Joseph
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World leaders greeted the new century and millennium with the Millennium Declaration adopted by the United Nations General Assembly in September 2000. The 147 heads of state and government who attended the Millennium Summit that month also accepted the Millennium Development Goals (MDGs) emerging from the Declaration as a blueprint for reducing poverty and improving people's lives across the globe. All 191 UN member states, including India, have since pledged to work towards meeting these goals in stages during the period up to 2015.

The eight goals, as well as the specific targets and indicators included under each, have come under legitimate criticism from several quarters for their many limitations. One of the serious shortcomings of the MDGs, for example, is the compartmentalisation of women within the goals and the narrow vision of gender concerns in the context of development reflected in the targets and indicators listed under each goal.

Two of the goals are gender specific: promote gender equality and empower women (MDG 3) and improve maternal health (MDG 5). But clearly, as the Millennium Declaration and several other UN agreements acknowledge, the other six — eradicate extreme

poverty and hunger; achieve universal primary education; reduce child mortality; combat HIV/AIDS, malaria and other diseases; ensure environmental sustainability; and create a global partnership for development — are also intimately linked to gender equality and women's empowerment.

The targets and indicators highlighted under the gender-specific goals further reduce their scope. For example, the only target mentioned under MDG 3 suggests that gender equality and women's empowerment can be achieved simply by eliminating gender disparity in primary and secondary education (preferably by 2005), and at all levels by 2015. Equally inadequate are the four indicators of equality and empowerment associated with this goal: the ratio of girls to boys at each educational level, the sex ratio in literacy among 15-24 year olds, women's share in wage employment in the non-agricultural sector, and the proportion of seats held by women in the national Parliament.

India's Country Report 2005 on the MDGs acknowledges not only that the goals are interlinked but that gender equality is a vital aspect of each. According to the Report, achievement of gender equality depends upon the integration of gender-related tar-

gets within each of the goals and, by the same token, achievement of all the goals is critically dependent upon the attainment of gender equality. The Report also mentions that India's Tenth Five-Year Plan (2002-2007) has not only taken note of the MDGs and included a number of targets to be achieved during the Plan period, but that these internal targets generally aim higher than the internationally agreed upon ones.

This is just as well since India's share of global responsibility towards meeting the MDGs is fairly substantial. The country has the dubious distinction of accounting for a quarter of all maternal deaths and nearly a quarter of all deaths of children under five across the globe, 34 per cent of the world's underweight children, and 28 per cent of the world's poor who live on less than US\$ 1 a day.

India's rank in the Human Development Index formulated by the United Nations Development Programme (UNDP) is not very encouraging either: it occupies the 127th position among 177 countries in 2005. This low ranking (with just 50 countries in a worse state of human development) has remained constant for three years, with the UNDP's Human Development Reports of 2003 and 2004 placing it at the same position. The country's ranking on the Gender Development Index (first introduced in 1995 to focus on the gender aspects of human development) improved marginally from 103 in 2003 and 2004 to 98 among 140 countries in 2005. Significantly, India does not even figure in the UNDP's Gender Empowerment Measure (GEM), presumably on account of the paucity of gender-disaggregated data on women's roles and positions in government, management, the professions and technical fields.

At this point, nearly half way into the 15-year period within which the MDGs are supposed to be fulfilled (at least to the extent prescribed by the targets), and close to the end of the 10th Plan period, how close is In-

dia to meeting its international obligations symbolised by the MDGs, not to mention achieving its own targets?

Maternal health

Take, first, the simpler of the two gender-specific MDGs and its accompanying target: improving maternal health by reducing the maternal mortality ratio by three quarters. India's maternal mortality ratio (MMR) is currently among the highest in the world; only about 30 countries across the globe – most of them among those included in UNDP's "low human development" category — have a worse record (India is placed close to the bottom of the "medium human development" category). According to India's Country Report, in order to achieve MDG 5, the MMR has to be reduced from the estimated 437 deaths per 100,000 live births in 1991 to 109 by 2015. The latest MMR figure quoted by the Report is 407 for 1998, although calculations by United Nations agencies, based on the most recent data reported by national authorities, peg it considerably higher at 540 in the period up to 2003.

In any case the prospects for cutting the prevailing MMR by three-quarters over the next few years do not seem very bright. According to an editorial in the Medical Journal Armed Forces India of July 2005, the National Health Policy of 1982 aimed at reducing the MMR from over 400 then to less than 200 by the year 2000. Going by figures from the Registrar General of India (RGI), quoted in the editorial, not only did the MMR remain 407 until the turn of the century, but evidence suggests that it has not changed significantly since.

This is not surprising considering the country's record in the proportion of births attended by skilled health personnel (the second of the two indicators mentioned under this goal). By the government's own admission, this has increased from 25.5 per cent in

prices lead to lower export earnings for developing country exporters. Many developing countries, and especially certain least developed countries, remain dependent for a significant share of their export earnings on one or a few agricultural exports. The

impact of world commodity price variability on producers and consumers and the effectiveness of price signals in bringing about adjustments in supply and demand depend on the extent to which world market prices are transmitted to domestic markets. ■

The Millennium Development Goals and Indian Women — Promises to keep, miles to go

Ammu Joseph
Bangalore

World leaders greeted the new century and millennium with the Millennium Declaration adopted by the United Nations General Assembly in September 2000. The 147 heads of state and government who attended the Millennium Summit that month also accepted the Millennium Development Goals (MDGs) emerging from the Declaration as a blueprint for reducing poverty and improving people's lives across the globe. All 191 UN member states, including India, have since pledged to work towards meeting these goals in stages during the period up to 2015.

The eight goals, as well as the specific targets and indicators included under each, have come under legitimate criticism from several quarters for their many limitations. One of the serious shortcomings of the MDGs, for example, is the compartmentalisation of women within the goals and the narrow vision of gender concerns in the context of development reflected in the targets and indicators listed under each goal.

Two of the goals are gender specific: promote gender equality and empower women (MDG 3) and improve maternal health (MDG 5). But clearly, as the Millennium Declaration and several other UN agreements acknowledge, the other six — eradicate extreme

poverty and hunger; achieve universal primary education; reduce child mortality; combat HIV/AIDS, malaria and other diseases; ensure environmental sustainability; and create a global partnership for development — are also intimately linked to gender equality and women's empowerment.

The targets and indicators highlighted under the gender-specific goals further reduce their scope. For example, the only target mentioned under MDG 3 suggests that gender equality and women's empowerment can be achieved simply by eliminating gender disparity in primary and secondary education (preferably by 2005), and at all levels by 2015. Equally inadequate are the four indicators of equality and empowerment associated with this goal: the ratio of girls to boys at each educational level, the sex ratio in literacy among 15-24 year olds, women's share in wage employment in the non-agricultural sector, and the proportion of seats held by women in the national Parliament.

India's Country Report 2005 on the MDGs acknowledges not only that the goals are interlinked but that gender equality is a vital aspect of each. According to the Report, achievement of gender equality depends upon the integration of gender-related tar-

gets within each of the goals and, by the same token, achievement of all the goals is critically dependent upon the attainment of gender equality. The Report also mentions that India's Tenth Five-Year Plan (2002-2007) has not only taken note of the MDGs and included a number of targets to be achieved during the Plan period, but that these internal targets generally aim higher than the internationally agreed upon ones.

This is just as well since India's share of global responsibility towards meeting the MDGs is fairly substantial. The country has the dubious distinction of accounting for a quarter of all maternal deaths and nearly a quarter of all deaths of children under five across the globe, 34 per cent of the world's underweight children, and 28 per cent of the world's poor who live on less than US\$ 1 a day.

India's rank in the Human Development Index formulated by the United Nations Development Programme (UNDP) is not very encouraging either: it occupies the 127th position among 177 countries in 2005. This low ranking (with just 50 countries in a worse state of human development) has remained constant for three years, with the UNDP's Human Development Reports of 2003 and 2004 placing it at the same position. The country's ranking on the Gender Development Index (first introduced in 1995 to focus on the gender aspects of human development) improved marginally from 103 in 2003 and 2004 to 98 among 140 countries in 2005. Significantly, India does not even figure in the UNDP's Gender Empowerment Measure (GEM), presumably on account of the paucity of gender-disaggregated data on women's roles and positions in government, management, the professions and technical fields.

At this point, nearly half way into the 15-year period within which the MDGs are supposed to be fulfilled (at least to the extent prescribed by the targets), and close to the end of the 10th Plan period, how close is In-

dia to meeting its international obligations symbolised by the MDGs, not to mention achieving its own targets?

Maternal health

Take, first, the simpler of the two gender-specific MDGs and its accompanying target: improving maternal health by reducing the maternal mortality ratio by three quarters. India's maternal mortality ratio (MMR) is currently among the highest in the world; only about 30 countries across the globe – most of them among those included in UNDP's "low human development" category — have a worse record (India is placed close to the bottom of the "medium human development" category). According to India's Country Report, in order to achieve MDG 5, the MMR has to be reduced from the estimated 437 deaths per 100,000 live births in 1991 to 109 by 2015. The latest MMR figure quoted by the Report is 407 for 1998, although calculations by United Nations agencies, based on the most recent data reported by national authorities, peg it considerably higher at 540 in the period up to 2003.

In any case the prospects for cutting the prevailing MMR by three-quarters over the next few years do not seem very bright. According to an editorial in the Medical Journal Armed Forces India of July 2005, the National Health Policy of 1982 aimed at reducing the MMR from over 400 then to less than 200 by the year 2000. Going by figures from the Registrar General of India (RGI), quoted in the editorial, not only did the MMR remain 407 until the turn of the century, but evidence suggests that it has not changed significantly since.

This is not surprising considering the country's record in the proportion of births attended by skilled health personnel (the second of the two indicators mentioned under this goal). By the government's own admission, this has increased from 25.5 per cent in

1992-93 to 39.8 per cent in 2002-03. Although the Country Reports suggests that this is an encouraging trend that can help reduce chances of maternal death, such slow improvement — 14 per cent over a decade — appears unlikely to help India meet the MDG target of reducing maternal mortality appreciably in the less than ten years left.

It is also important to note the inter-state differences in MMR which, according to the RGI, range from 87 in Kerala (far below the national average as well as the MDG-based target of 109) to 707 in Uttar Pradesh and 739 in Orissa (considerably higher than the national average and nearly seven times the MDG target). Unless the latter states, along with Rajasthan (607), Madhya Pradesh (498) and Bihar (451), rapidly and effectively improve their performance on this front, the goal of improving maternal health in the country may remain unfulfilled well beyond 2015.

Gender equality

With the goal of promoting gender equality and women's empowerment having been reduced within the MDGs to eliminating gender disparity in education, achieving this sole target under goal number three may be more feasible. According to the Country Report, at the beginning of the decade the proportion of females to males was 78:100 in primary education, 63:100 in secondary education and 58:100 in higher/tertiary education. The government seems fairly upbeat about the possibility of achieving the limited target of ensuring that there is no gender disparity in education by 2015. The Report puts gender parity at the primary level at about 88 per cent for the whole country but highlights the fact that two states (Sikkim and Meghalaya) have already reached parity while the majority of the rest follow close behind. In addition it points to increased enrolment and decreased drop-out rates among girls at various levels.

The Country Report also highlights India's record with regard to the other indicators listed under MDG 3. For instance, it puts the female literacy rate at just over 53 per cent in 2001 (although the figure revealed by the Census of India, 2001 is a little above 54 per cent and UN agencies, working with national estimates, record it at a little below 48 per cent). According to the Report, the ratio of literate women to men is 71:100.

However, in terms of both female literacy and gender parity in education, inter-state variations will have to be tackled if women's educational disadvantage is to be actually eliminated on the ground. For example, a number of states are lagging way behind in female literacy, with Bihar and Jharkhand bringing up the rear at just over 33 and 39 per cent respectively, and states like Jammu & Kashmir (41.8%), Uttar Pradesh (42.9%), Arunachal Pradesh (44.2%) and Rajasthan (44.3%) also trailing well below the national average, which in itself is hardly a satisfactory benchmark.

According to the Report, during 1999-2000 the share of Indian women in wage employment in the non-agricultural sector — the third indicator under MDG 3 — was just over 15 in rural areas and approximately 16.6 in urban areas. And the proportion of seats held by women in Parliament — the fourth indicator — is abysmally low at just a little over 9 per cent (averaging the numbers in the Lok Sabha and the Rajya Sabha in 2004). Clearly the country has many miles to go before it achieves even the limited vision of gender equality and women's empowerment outlined by MDG 3.

Child mortality

Although the Country Report begins by acknowledging that gender equality is a prerequisite for the achievement of all the MDGs, it stops short of seriously addressing gender-related factors in its discussion of other goals.

Take, for instance, MDG 4: reduce child mortality. The specific target is to "reduce by two thirds the mortality rate among children under five."

According to the Human Development Report 2005 (HDR 05) India currently accounts for 2.5 million child deaths annually, which translates into approximately one fifth of the world total of 10.5 million. In other words, of every five children who die in the world, at least one is an Indian child. What is more, one in every 11 children in this country dies in the first five years of life because of lack of access to low technology, low cost interventions. To make matters worse, malnutrition, which has barely improved over the past decade, affects at least half of all Indian children.

Child mortality has everything to do with the status of women but there is no mention in the MDGs or in India's Country Report of the gender aspects of the problem. Take, for instance, gender-related differences in child death rates. According to the HDR 05, in India "girls aged one to five are 50 per cent more likely to die than boys." This leads to the phenomenon of "missing" girls: "In this country alone as many as 130,000 young lives are lost each year because of the disadvantage associated with being born with two X chromosomes." (HDR 05) What is more, female mortality rates remain higher than male rates up to age 30, reversing normal global demographic patterns.

Most reasons for the higher rate of child mortality among girls have to do with gender. As the latest HDR points out, the gender differences in child deaths reflect a widespread preference for sons, particularly but not only in the northern states of the country. Less valued than their brothers, girls are often taken to health facilities in more advanced stages of illness, taken to less qualified doctors and have less money spent on their nutrition and health care.

There are additional gender-related rea-

sons for India's scandalously high, though slowly reducing, child mortality rate. The low social status and consequent educational disadvantage suffered by women have a direct bearing on their own health as well as that of their children. For example, about one-third of Indian children are underweight at birth and that is directly related to their mothers' poor health.

Women's education is, of course, important in itself – because women have or should have equal right to education. But it is also closely associated with child mortality. As the HDR 05 points out, the under-five mortality rate is more than twice as high for children of illiterate mothers as for those whose mothers have completed at least middle school. Apart from being less prone to under-nutrition, better educated mothers are more likely to use basic health services, have fewer children, avoid having children too early, and space births. And all these factors contribute to child survival.

So, clearly, as India's Country Report initially points out, all the MDGs are closely connected and gender inequality impacts almost all of them. Reducing child mortality (MDG No. 4) cannot realistically be separated from MDG 1 (eradicate extreme poverty and hunger) and MDG 2 (achieve universal primary education), besides the two gender-specific goals: MDG 3 (promote gender equality and empower women) and MDG 5 (reduce maternal mortality). Actually, even MDG 6 (combat HIV/AIDS, malaria and other diseases) is linked: for example, the growing number of women who are HIV+ suggests that more children at risk from the virus – and, as is well known, women's vulnerability to HIV/AIDS also has to do with gender disparities.

In spite of these connections between gender and child mortality, India's Country Report on the MDGs glosses over the obvious and apparently growing gender gap in the Under Five Mortality Rate (USMR). The trend

is clear in some of the graphs and tables in the section on child mortality. For example, the graph presenting data on the U5MR by place of residence and sex shows that the overall rate has gone down in both rural and urban areas between the periods 1988-1992 and 1998-2002. However, while the difference between male and female child death rates has remained more or less the same in rural areas during the two periods (higher by approximately 17 for females), the even more distressing fact is that the difference in urban areas has risen from one in the earlier period to nine in the later period. In other words, the U5MR for girls actually increased in urban areas over that decade. All the Country Report has to say about this is: "More declines are noticed for males than for females."

The growing gender gap is evident in the Infant Mortality Rate (IMR), too. It is true, as the Report states, that the IMR has been slowly but steadily falling over the decades, from 114 in 1980 to 60 in 2003. What is not highlighted in the document is the fact that the gap between male and female child deaths has actually risen in the new millennium. It is clear from the table and graph presenting IMR data by sex that the gap hovered around two between 1980 and 2000 and then jumped to seven by 2003. Despite this disturbing development, the Report merely says, "The rate of decline is more pronounced in the case of male as compared to female."

What is more, the alarming decline in the sex ratio of children in the 0-6 age group over the past decade and more is dealt with – indeed, downplayed – in just one paragraph at the very end of the chapter dealing with MDG 4. The sex ratio of females to males in the Indian population is among the most imbalanced in the world: not only has it long been awkwardly and unnaturally skewed, it has also been declining for sev-

eral decades – from 972 in 1901 to 927 in 1991. The shocking revelation of the Census of India, 2001 was that while the sex ratio among the general population stood at 933 females to 1000 males (up from 927 in 1991), the sex ratio among the youngest section of the population – 0-6 years – had dropped sharply to 927 (down from 945 in 1991).

The Union Minister for Health recently acknowledged that the number of "missing girls" in the country had risen from 25 million in the 1990s to 35 million in the new millennium. What is more, the under-six sex ratio is most unfavourable in prosperous states like Punjab, Haryana, Gujarat and Maharashtra. Not only do urban centres like Delhi and Chandigarh also have an adverse sex ratio but in the capital city the problem appears to be most acute in the more affluent areas. It appears that the falling sex ratio has increasingly become a problem among the urban, affluent and educated sections of the population, although it is also quickly spreading in other areas. According to the Census authorities, among the factors contributing to the dismal situation are sex-selective abortion, female infanticide, and neglect of girl children.

Considering the evidence, it is remarkable that India's Country Report on the MDGs does not list gender discrimination among the principal causes of child mortality in the country. With the data clearly suggesting that it is an important factor contributing to the high rate of child death, it is obvious that MDG 4 cannot be met without tackling the problems that render the girl child in India an endangered species.

Indeed, according to the HDR 05, reducing gender inequality would have a catalytic effect on cutting child deaths: if India closed the gender gap in mortality between girls and boys aged one to five, that would save an estimated 130,000 lives, reducing the

country's overall child mortality rate by a substantial five per cent. Instead, the document reveals, India is widely off track for meeting the child mortality target, with the annual rate of decline having slowed down between the 1980s and the 1990s by almost one fifth – from 2.9 to 2.3 per cent.

Development, security, human rights for all

It is worth noting that, unfortunately and ironically, this has happened during the decades when the country ostensibly began to move into the premier league of world economic growth, with high technology exports soaring and the huge Indian consumer class becoming a magnet for foreign investors.

The World Summit held at the UN headquarters in New York in September 2005, to mark the fifth anniversary of the adoption of the Millennium Declaration and Development Goals, was expected to result in major decisions on critical issues such as ending poverty, promoting human rights,

fighting terrorism and helping countries recover from deadly conflicts of various kinds. The main themes of the Summit were: Freedom from Want, Freedom from Fear and Freedom to Live in Dignity.

In a report titled "In Larger Freedom: Towards Development, Security and Human Rights for All," released ahead of the Summit, UN Secretary General Kofi Annan said the "world must advance the causes of security, development and human rights together, otherwise none will succeed. Humanity will not enjoy security without development; it will not enjoy development without security; and it will not enjoy either without respect for human rights."

While that is certainly true, it is equally true that neither security nor development nor human rights can be achieved unless women's rights to all three are fully recognised, respected and realised. Clearly women, too, have a right to Freedom from Want, Freedom from Fear and Freedom to Live in Dignity. ■

The Corruption Scene in India

N. Vittal

Formerly Central Vigilance Commissioner

Corruption is lack of integrity. This could be lack of intellectual integrity, financial integrity or moral integrity. In the context of public life, it is the lack of financial integrity which is prominently under discussion. The corrosive negative impact of corruption is being increasingly realized. World Bank defined corruption as use of public office for private gain. It is increasingly therefore, in the context of public affairs and governance of the country that the

issue of corruption is being discussed and highlighted.

The United Nations had adopted in the year 2003, the Anti-Corruption Convention. This was preceded by the 1997 adoption of the Anti-Corruption Convention by 24 OECD countries. The fight against corruption as an important item in the international scene emerged after the end of the cold war.

So long as the cold war l

world was divided between two super powers, the United States and the soviet Union, in international affairs, particularly when it comes to financial assistance and loans from multilateral aid agencies like the World Bank etc. are concerned, corruption did not figure prominently as a significant issue. In those days what was important was the geo strategic consideration of the super powers. Some of the developing countries were led by notoriously corrupt dictators. The World Bank was able to fund them because the attitude of the super powers was, 'it is true that so and so may be the son of a bitch, but he is our son of a bitch'.

Corrosive Impact

But after the end of the cold war the corrosive impact of corruption is being increasingly realized. It is seen to be anti economic development, anti national and anti poor. The need for checking corruption in global business also emerged more or less simultaneously after the end of the cold war because, in the globalised economy, the need for ensuring good corporate governance was soon realized. Globalization involves the movement of four economic parameters, namely, (i) physical capital in terms of plant and machinery, (ii) financial capital in terms of the money invested in emerging markets, (iii) labour and (iv) technology move across national borders. International investors are increasingly realizing that it is not enough to have good corporate management, but it is necessary to have good corporate governance. Corporate management involves handling the resources available to a manager, namely, financial resources, physical resources and human resources and time in the best possible manner to achieve goals like increased profitability, market capitalization and so on. Nevertheless, it is possible for a company to have a good corporate management but fail to be

honest in its transactions leading ultimately to disaster. Corporate governance, refers to the moral framework, the ethical framework and the value framework within which business decisions are taken. The collapse of the South East Asian tiger economies in 1997 followed by the New York stock exchange collapse of Fortune 500 companies like Enron, Worldcom and leading firms like Arthur Anderson showed that if there was no good corporate governance, then the healthy business cannot take place.

We are therefore living in a world where when it comes to public governance, the need for integrity and checking corruption is increasingly realized as very valuable. Even in business, the need for honesty is being underlined by the focus on the principles of corporate governance. Ultimately, corporate governance depends on three elements. First is transparency. Because, without transparency the second element of accountability cannot be enforced and accountability in the case of an enterprise is to ensure that the interest of the shareholders and stakeholders are protected and are not compromised.

It is against this overall context to the issue of corruption globally, we may look at India. When asked about corruption, Indira Gandhi dismissed the question by saying 'corruption is a global phenomenon'. It is true that corruption is a global phenomenon, practically every country has cases of corruption. But then there is a lot of difference between the degree of corruption between countries. The Transparency International, an NGO based in Berlin annually publishes the grading of the countries on the basis of what is called Corruption Perception Index (CPI). According to the 2005 CPI, India ranks at 88 out of the 156 countries. The least corrupt is Finland and the most corrupt country is Bangladesh. China figures at rank 78.

TI 2005 Corruption Perceptions Index

| Country | Country rank | 2005 CPI Score* | Confidence range** | Surveys used*** |
|---------|----------------------|-----------------|--------------------|-----------------|
| 1. | Iceland | 9.7 | 9.5 - 9.7 | 8 |
| 2. | Finland | 9.6 | 9.5 - 9.7 | 9 |
| 3. | New Zealand | 9.6 | 9.5 - 9.7 | 9 |
| 4. | Denmark | 9.5 | 9.3 - 9.6 | 10 |
| 5. | Singapore | 9.4 | 9.3 - 9.5 | 12 |
| 6. | Sweden | 9.2 | 9.0 - 9.3 | 12 |
| 7. | Switzerland | 9.1 | 8.9 - 9.2 | 9 |
| 8. | Norway | 8.9 | 8.5 - 9.1 | 9 |
| 9. | Australia | 8.8 | 8.4 - 9.1 | 13 |
| 10. | Austria | 8.7 | 8.4 - 9.0 | 9 |
| 11. | Netherlands | 8.6 | 8.3 - 8.9 | 9 |
| 12. | United Kingdom | 8.6 | 8.3 - 8.8 | 11 |
| 13. | Luxembourg | 8.5 | 8.1 - 8.9 | 8 |
| 14. | Canada | 8.4 | 7.9 - 8.8 | 11 |
| 15. | Hong Kong | 8.3 | 7.7 - 8.7 | 12 |
| 16. | Germany | 8.2 | 7.9 - 8.5 | 10 |
| 17. | USA | 7.6 | 7.0 - 8.0 | 12 |
| 18. | France | 7.5 | 7.0 - 7.8 | 11 |
| 19. | Belgium | 7.4 | 6.9 - 7.9 | 9 |
| 20. | Ireland | 7.4 | 6.9 - 7.9 | 10 |
| 21. | Chile | 7.3 | 6.8 - 7.7 | 10 |
| 22. | Japan | 7.3 | 6.7 - 7.8 | 14 |
| 23. | Spain | 7.0 | 6.6 - 7.4 | 10 |
| 24. | Barbados | 6.9 | 5.7 - 7.3 | 3 |
| 25. | Malta | 6.6 | 5.4 - 7.7 | 5 |
| 26. | Portugal | 6.5 | 5.9 - 7.1 | 9 |
| 27. | Estonia | 6.4 | 6.0 - 7.0 | 11 |
| 28. | Israel | 6.3 | 5.7 - 6.9 | 10 |
| | Oman | 6.3 | 5.2 - 7.3 | 5 |
| 30. | United Arab Emirates | 6.2 | 5.3 - 7.1 | 6 |
| 31. | Slovenia | 6.1 | 5.7 - 6.8 | 11 |
| 32. | Botswana | 5.9 | 5.1 - 6.7 | 8 |
| | Qatar | 5.9 | 5.6 - 6.4 | 5 |
| | Taiwan | 5.9 | 5.4 - 6.3 | 14 |
| | Uruguay | 5.9 | 5.6 - 6.4 | 6 |
| 36. | Bahrain | 5.8 | 5.3 - 6.3 | 6 |
| 37. | Cyprus | 5.7 | 5.3 - 6.0 | 5 |
| | Jordan | 5.7 | 5.1 - 6.1 | 10 |
| 39. | Malaysia | 5.1 | 4.6 - 5.6 | 14 |
| 40. | Hungary | 5.0 | 4.7 - 5.2 | 11 |
| | Italy | 5.0 | 4.6 - 5.4 | 9 |

| | | | | |
|-----|---------------------|-----|-----------|----|
| | South Korea | 5.0 | 4.6 - 5.3 | 12 |
| 43. | Tunisia | 4.9 | 4.4 - 5.6 | 7 |
| 44. | Lithuania | 4.8 | 4.5 - 5.1 | 8 |
| 45. | Kuwait | 4.7 | 4.0-5.2 | 6 |
| 46. | South Africa | 4.5 | 4.2-4.8 | 11 |
| 47. | Czech Republic | 4.3 | 3.7 - 5.1 | 10 |
| | Greece | 4.3 | 3.9 - 4.7 | 9 |
| | Namibia | 4.3 | 3.8 - 4.9 | 8 |
| | Slovakia | 4.3 | 3.8 - 4.8 | 10 |
| 51. | Costa Rica | 4.2 | 3.7 - 4.7 | 7 |
| | El Salvador | 4.2 | 3.5 - 4.8 | 6 |
| | Latvia | 4.2 | 3.8 - 4.6 | 7 |
| | Mauritius | 4.2 | 3.4 - 5.0 | 6 |
| 55. | Bulgaria | 4.0 | 3.4 - 4.6 | 8 |
| | Colombia | 4.0 | 3.6 - 4.4 | 9 |
| | Fiji | 4.0 | 3.4 - 4.6 | 3 |
| | Seychelles | 4.0 | 3.5 - 4.2 | 3 |
| 59. | Cuba | 3.8 | 2.3 - 4.7 | 4 |
| | Thailand | 3.8 | 3.5 - 4.1 | 13 |
| | Trinidad and Tobago | 3.8 | 3.3 - 4.5 | 6 |
| 62. | Belize | 3.7 | 3.4 - 4.1 | 3 |
| | Brazil | 3.7 | 3.5 - 3.9 | 10 |
| 64. | Jamaica | 3.6 | 3.4 - 3.8 | 6 |
| 65. | Ghana | 3.5 | 3.2 - 4.0 | 8 |
| | Mexico | 3.5 | 3.3 - 3.7 | 10 |
| | Panama | 3.5 | 3.1 - 4.1 | 7 |
| | Peru | 3.5 | 3.1 - 3.8 | 7 |
| | Turkey | 3.5 | 3.1 - 4.0 | 11 |
| 70. | Burkina Faso | 3.4 | 2.7 - 3.9 | 3 |
| | Croatia | 3.4 | 3.2 - 3.7 | 7 |
| | Egypt | 3.4 | 3.0 - 3.9 | 9 |
| | Lesotho | 3.4 | 2.6 - 3.9 | 3 |
| | Poland | 3.4 | 3.0 - 3.9 | 11 |
| | Saudi Arabia | 3.4 | 2.7 - 4.1 | 5 |
| | Syria | 3.4 | 2.8 - 4.2 | 5 |
| 77. | Laos | 3.3 | 2.1 - 4.4 | 3 |
| 78. | China | 3.2 | 2.9 - 3.5 | 14 |
| | Morocco | 3.2 | 2.8 - 3.6 | 8 |
| | Senegal | 3.2 | 2.8 - 3.6 | 6 |
| | Sri Lanka | 3.2 | 2.7 - 3.6 | 7 |
| | Suriname | 3.2 | 2.2 - 3.6 | 3 |
| 83. | Lebanon | 3.1 | 2.7 - 3.3 | 4 |
| | Rwanda | 3.1 | 2.1 - 4.1 | 3 |
| 85. | Dominican Republic | 3.0 | 2.5 - 3.6 | 6 |
| | Mongolia | 3.0 | 2.4 - 3.6 | 4 |

| | | | | |
|------|----------------------------|-----|-----------|----|
| | Congo, Republic of | 2.3 | 2.1 - 2.6 | 4 |
| | Georgia | 2.3 | 2.0 - 2.6 | 6 |
| | Kyrgyzstan | 2.3 | 2.1 - 2.5 | 5 |
| | Papua New Guinea | 2.3 | 1.0 - 2.6 | 4 |
| | Venezuela | 2.3 | 2.2 - 2.4 | 10 |
| 137. | Azerbaijan | 2.2 | 1.9 - 2.5 | 6 |
| | Cameroon | 2.2 | 2.0 - 2.5 | 6 |
| | Ethiopia | 2.2 | 2.0 - 2.5 | 8 |
| | Indonesia | 2.2 | 2.1 - 2.5 | 13 |
| | Iraq | 2.2 | 1.5 - 2.9 | 4 |
| | Liberia | 2.2 | 2.1 - 2.3 | 3 |
| | Uzbekistan | 2.2 | 2.1 - 2.4 | 5 |
| 144. | Congo, Democratic Republic | 2.1 | 1.8 - 2.3 | 4 |
| | Kenya | 2.1 | 1.8 - 2.4 | 8 |
| | Pakistan | 2.1 | 1.7 - 2.6 | 7 |
| | Paraguay | 2.1 | 1.9 - 2.3 | 7 |
| | Somalia | 2.1 | 1.6 - 2.2 | 3 |
| | Sudan | 2.1 | 1.9 - 2.2 | 5 |
| | Tajikistan | 2.1 | 1.9 - 2.4 | 5 |
| 151. | Angola | 2.0 | 1.8 - 2.1 | 5 |
| 152. | Cote d'Ivoire | 1.9 | 1.7 - 2.1 | 4 |
| | Equatorial Guinea | 1.9 | 1.6 - 2.1 | 3 |
| | Nigeria | 1.9 | 1.7 - 2.0 | 9 |
| 155. | Haiti | 1.8 | 1.5 - 2.1 | 4 |
| | Myanmar | 1.8 | 1.7 - 2.0 | 4 |
| | Turkmenistan | 1.8 | 1.7 - 2.0 | 4 |
| 158. | Bangladesh | 1.7 | 1.4 - 2.0 | 7 |
| | Chad | 1.7 | 1.3 - 2.1 | 6 |

Explanatory Notes: *CPI Score relates to perceptions of the degree of corruption as seen by business people and country analysts and ranges between 10 (highly clean) and 0 (highly corrupt).

** Confidence range provides a range of possible values of the CPI score. This reflects how a country's score may vary, depending on measurement precision. Nominally, with 5 percent probability the score is above this range and with another 5 percent it is below. However, particularly when only few sources (n) are available an unbiased estimate of the mean coverage probability is lower than the nominal value of 90%.

***Surveys used refers to the number of surveys that assessed a country's performance. 18 surveys and expert assessments were used and at least 3 were required for a country to be included in the CPI.

From the ranking of India in the Corruption Perception Index, it is obvious that India is one of the more corrupt countries in the world. But then, India as a country suffers as a result of corruption. Corruption is anti-economic development, anti national and anti poor. The 1999 UNDP Report pointed

out that if India's corruption level comes down to that of the Scandinavian countries, the GDP will grow by 1.5% and FDI will increase by 12.5%. In the year 2001, the PHD Chamber of Commerce got a study made and it showed that if the corruption level comes down by the standard deviation of

15%, then investment will increase by 300% and GDP will grow by 1.9%. A closer look at the cost of corruption so far as the common man is concerned, is brought out in a study made by the India chapter of the Transparency International and the Centre for Marketing and Media Studies in Delhi. The highlights of the 2005 studies are as follows:

The eleven public services covered in this study are: Police (Crime/Traffic), Judiciary (Lower Courts), Land Administration, Municipal Services, Government Hospitals, Electricity (Consumers), PDS (Ration Card/Supplies), Income Tax (Individual Assesseees), Water Supply, Schools (upto 12th Std.) and Rural Financial Institutions (Farmers).

Rs. 21,069 crore in bribe .

According to the study, common citizens of the country pay a bribe of Rs.21,069 crore while availing one or more of the eleven public services in a year. As high as 62 per cent of citizens think that the corruption is not a hearsay, but they, in fact, have had firsthand experience of paying a bribe or "using a contact" to get a job done in a public office.

Three-fourths of citizens think that the level of corruption in public services has increased during the last one year (2004-2005). Hardly ten percent think that such corruption is on the decline. There are no significant differences among the States in the perceptions about the extent of corruption or in their experience with such corruption.

This study brings out that one-third to half of the compulsions leading to such petty corruption involving the common man could be addressed and also removed with simple initiatives, including introduction of technologies.

Corruption is not merely in the media or in the minds of people as it is sometimes made out, but it is in the system all across the public services, that is what this study high-

lights. And the users and providers of those public services know what needs to be done to address the problem which this study has brought out.

According to this study, relatively Police stands out high on the corruption score. Judiciary, Lower Courts and Land Administration are rated next. The corruption in Government Hospitals is mostly to do with non-availability of medicines, getting admission, consultations with doctors and availing of diagnostic services. Despite reforms, electricity services figure high on corruption score. PDS figures lower in the corruption score because the problem of common man dealing with services is more to do with leakages in the system rather than direct monetary corruption.

Going by the composite ranking of States on corruption involving common citizen and in the context of eleven Public Services, Kerala stands out as the least corrupt State in India. Bihar, on the other, is the most corrupt State. Jammu & Kashmir is next only to Bihar. In fact, perhaps not surprisingly, on all parameters and in the context of all the eleven Services, Bihar stands out far ahead as the most corrupt State. Himachal Pradesh in contrast comes out as being less corrupt when compared to States like Tamil Nadu, Maharashtra or Gujarat. Madhya Pradesh, Karnataka, Rajasthan and Assam, on the other hand, also are on the top of corruption scale.

An overwhelming majority of citizens are vocal about the absence of transparency and accountability in the delivery of these services. They are full of anguish and, at times, some are angry at the state of affairs. It is evident from the annual CMS surveys on corruption that the use of technology at the frontend of those offices is likely to bring down corruption with increase in transparency.

One-sixth of public think that citizen users of Government services themselves are responsible for corruption. They believe that there is no active and sustained c.

society movement. The efforts are sporadic, localized and short-lived and have never acquired a character of a larger movement.

Users of various public services across the country in this study have named seven key factors that stand out as responsible for a widespread corruption in the system. These include-

- * Lack of transparency and accountability in the system
- * Lack of an effective corruption reporting mechanism
- * Lack of honesty in officials in the Government
- * Acceptance of 'Bribe' as a way of life, custom and culture
- * Ineffective anti-corruption institutions, including Police and judiciary
- * Poor economic policies
- * Inadequate training and orientation of Government officials.

Not all states are equally corrupt. The study has also made a ranking of 20 states in India on the basis of corruption and this can be seen as follows.

| State | Composite Score | Rank |
|------------------|-----------------|------|
| Kerala | 240 | 1 |
| Himachal Pradesh | 301 | 2 |
| Gujarat | 417 | 3 |
| Andhra Pradesh | 421 | 4 |
| Maharashtra | 433 | 5 |
| Chhattisgarh | 445 | 6 |
| Punjab | 459 | 7 |
| West Bengal | 461 | 8 |
| Orissa | 475 | 9 |
| Uttar Pradesh | 491 | 10 |
| Delhi | 496 | 11 |
| Tamil Nadu | 509 | 12 |
| Haryana | 516 | 13 |
| Jharkhand | 520 | 14 |
| Assam | 542 | 15 |
| Rajasthan | 543 | 16 |
| Karnataka | 576 | 17 |

| | | |
|-------|-----|----|
| MP | 584 | 18 |
| J&K | 655 | 19 |
| Bihar | 695 | 20 |

This brings us to the basic issue. Is it possible to make India corruption-free? As Central Vigilance Commissioner from September 3, 1998 to September 2, 2002, I faced with this problem day in and day out for four years. Based on my experience, I can argue that there is no need to lose hope. India can become a corruption-free country. The first point to realize is that there have been countries which had this problem like India in corruption, and have been able to turn around and tackle corruption effectively. Britain itself was a corrupt country and one prime minister William Gladstone between 1864 to 1892 became prime minister four times and during his tenure was able to introduce so many changes in law and the system that by the end of his tenure, Britain had become a less corrupt country. In our own life time we have seen Lee Quan Yew as prime minister for more than three decades in Singapore transforming that country as one of the cleanest in the corruption perception index today. Hong Kong was once notorious for corruption. In 1974, the Independent Commission against Corruption (ICAC) was set up and that organization has been able to bring a dramatic change in bringing down corruption in Hong Kong. When in 1997, Hong Kong merged with main land China, there was a fear that the level of corruption may be increased. But on the contrary the mainland Chinese government seems to be keen on learning from Hong Kong and trying to tackle the issue of corruption to maintain the phenomenal economic growth of China. In the Transparency International's Corruption Perception Index list, China emerges as less corrupt than India. Hence the first idea for us to internalize is that

corruption can be tackled. Other countries have done it.

The Vicious Cycle

The second point is to realize the dynamics of corruption and tackle the root causes. Corruption in India is the result of the vicious cycle starting with political corruption leading to bureaucratic corruption, business corruption, corruption in NGOs and finally the criminalization of politics. Corruption in India owes a lot to the fact that the democratic system we have adopted involves political parties collecting funds for election and other purposes. All political parties collect funds in cash. This is black money. Black money is the oxygen for corruption and corruption is oxygen for black money. Hence a political system which is dependent on black money can never take the initiative to fight corruption. It is the political corruption which lies at the starting point of the vicious cycle of corruption in our country. Bureaucratic corruption is a result of a number of factors. The permit licence raj for more than four decades after independence was a fine breeding ground for corruption and the root cause of corruption in the licence era were scarcity of goods and services, lack of transparency, the bureaucratic red tape and consequent need for speed money, the legal cushions of safety that has been created on the very healthy principle that everybody is innocent till proved guilty which was only exploited by the corrupt and finally the tribalism among the corrupt. The business corruption flourish because in the permit licence raj, the only way of influencing the politicians and bureaucrats was by corrupt means. The recent phenomenon of the NGOs also shows that even this sector is not free from corruption. This all pervasive corruption has resulted in the loss of the legitimacy of the state institutions giving rise to criminalization in politics.

The recent directives of the Supreme

Court under which, candidates to election have to declare their criminal background has brought out the shocking fact that a significant percentage of the members of the legislature, may be around 20% have criminal cases framed against them in courts. If law breakers become law makers, then how can good governance be ensured?

Corruption is the antithesis of good governance. Good governance involves the rule of law. Corruption corrodes the very process of rule of law and distorts it. In our constitution there are three pillars for the governance of the state. The legislature makes the law. The judiciary interprets the law and the executive, which is both the permanent bureaucracy as well as the prime minister, chief minister and the council of ministers execute the law. The very presence of law breakers in the legislature results in a very peculiar situation in our country, where laws which are ensured to check, for example, the growth of the black money, are not implemented at all. The 1988 Benami Transaction Prohibition Act still remains a dead letter, because the rules for implementing it have not been framed even after 18 years. Even when a law is passed for preventing money laundering, the laws like Customs Act, Excise Act, Income Tax Act, the evasion of which results in generation of black money which leads to corruption are left out of the schedule of the Act. As a result, the Prevention of Money Laundering Act is an ineffective Act. The Income Tax Act, Excise Act etc. have got so many exemptions that they confer tremendous discretion on the authorities / powers which are misused for corruption. We can therefore think in terms of a systematic approach to tackle the issue of corruption by breaking the vicious cycle starting with political corruption on to bureaucratic corruption, business corruption and criminalization of politics and so on.

For checking political corruption, the

starting point should be the attack on black money and reform of the campaign funding laws. To reduce the element of black money, laws like the Benami Transaction prohibition Act which were designed to check the use of black money must be vigorously implemented. The transaction laws like the Income Tax, Customs, Excise should be made almost zero exemption laws so there is no question of exemption and the transparency element is enhanced. To prevent criminalization of politics, it is necessary to ensure that those candidates against whom criminal charges have been framed in court, where a legal application of the mind of the magistrate had taken place, should be prevented from contesting elections till they are cleared by the courts. Today, the delay in the legal system is exploited by the criminals to enter politics to save themselves. The very delay in the judicial system needs to be tackled and made to work against the criminals in politics. These measures will go a long way in reducing the scope of corruption at the political level. Another reason why corruption flourishes in our country is because our judicial processes are very time-consuming and slow. The conviction rate in our criminal courts is hardly 6%. Therefore, corruption has become a low risk, high profit business in India. To overcome this, the simple method will be to have the time limit of maximum six months for corruption cases in the trial stage and in the appeal stage. Only one appeal must be allowed. Summary trial procedures must be adopted. As a result, criminal cases get their final decision within one year. This will go a long way in ensuring that the corrupt are punished quickly.

A Three-point Strategy

Bureaucratic corruption can be tackled if the following three point strategy is

adopted: (i) simplification of rules and procedures so that the scope of corruption is reduced. It is the complicated rules which give tremendous powers to the bureaucracy in interpretation that is the root of mischief. Simple rules can be the first step forward. The five point strategy in the industrial engineering of elimination, combination, re-sequencing, substitution and modification can be adopted to all the rules in existence and this will go a long way in bringing a systematic simplification of the entire set of rules. In fact, one problem we have in our country is the lack of the sunset clause in our laws, so that laws continue to be on the statute book long after their relevance has passed. These broad measures should go a long way in cleaning up our system.

(ii) The second element of the three point strategy should be transparency and empowerment of the public. It is a very happy development that the current UPA government which came to power in 2004 has passed the Right to Information Act. As Aruna Roy and other leaders like Anna Hazare, Dr. Jayaprakash Narain have pointed out, the very right to information can be a powerful tool for empowering citizens to ask questions and bring greater transparency in the system and sunshine is the best antidote for corruption. This combined with widespread application of information technology can result in significant reduction of corruption. For instance, three significant cases of IT application in India which have led to improvement are remarkable. First of course, is the two decade old computerization of the Rail-Way passenger reservation system. The second is the use of IT in electronic voting machines. The third is the National Stock Exchange which emerged as the third biggest stock exchange in the world, after the New York Stock Exchange and NASDAQ,

based on the satellite communication system. So IT applications and e-governance will bring in greater transparency, easier access for citizens for their rights to information and in the way help in bringing down corruption.

(iii) The third important aspect is prompt punishment of the guilty. In fact, as Central Vigilance Commissioner I found that even after the CVC had given its recommendation after due enquiry, the disciplinary authorities were not taking action because, there was a delay in the system or there was a tendency to protect the corrupt. Once the matter was taken up directly with the authorities there was some improvement.

Sense of Values

After all, the level of corruption in any country depends on three factors. The first is the individual's sense of values. This is shaped by parents at home, the educational system, teachers, peers and religion. A value-based education system is available today only in institutions run by religiously inspired organizations like the Ramakrishna Mission, DAV schools or the Society of Jesus. The Government of India's adoption of the secular approach has resulted in the deemphasizing of the values in the education system and as a result perhaps contributed to the development of a cynical generation which believes in the philosophy of "get on, get honor and get honest".

The second factor that affects the level of corruption in any country is the social set of values. Over the years, in this country, corruption has become respectable. This is because of the all pervasive black money and the contribution to black money made by the respective professionals like those in the medical profession, legal profession and auditing and so on. Many professionals

declare their full income and so tax evasion and creation of black money has become respectable in our country.

The third factor is the system. In fact, in the preceding paragraph, I tried to highlight what specific steps could be taken so far as the system is concerned to tackle political corruption and bureaucratic corruption. Tackling these two will go a long way in cleaning up the other sectors involved in corruption like criminals, business as well as NGOs.

In fact, I would like to end this on an optimistic note. The Supreme Court has forced the candidates to declare their criminal background, educational qualification and wealth details and this is the first step to bring in greater transparency in the political system and allow citizens empowered by knowing the correct facts about their representatives. The Right to Information Act is another good step taken and this combined with the initiative for e-governance should go a long way in improving transparency in our system and empowering the people. The increasing presence of the youth in the country and the rising levels of education should help in ultimately building a corruption free India in the years to come and in achieving this goal, as we have adopted a democratic system, we must practise the advice of the eternal *Itihas* Upanishad.

Let us come together. Let us enjoy together. Let our strengths come together. Let us move from darkness to light. Let us avoid the twin danger of the spread of misunderstanding and hatred. That way exists real progress.

Sahana yavatu Satyameva Jayate

Saha Yajata Kuru Yajata

Tejas vina madhata

Ma vidu

Om Shanti

Economics and Health

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Thomas Malthus was an English economist who lived during the period 1766-1834. In his essay on population and its effects on society he put forward the theory that population growth will always outrun the food supply and that betterment of mankind is impossible without control of reproduction. Malthusian theory persuaded later economists and planners to promote family planning and contraception. Today in spite of population growth all developed countries are self sufficient and most developing countries are basically self-sufficient in food supply. If Malthus lived in present century he would have modified his theory that health care and social security costs rather than food supply as the priority for any developed nation.

Life Expectancy

Life expectancy at birth is the average number of years a person may live according to the mortality patterns prevalent in a country. It is one of the best indicators of a country's level of development and overall health status of the population. Malthus lived at a time when the average life expectancy at birth was about 40 years in England compared to 77.5 years today. Malthus was lucky enough to have lived 68 years in the pre-antibiotic era. Today, in the 21st century, thanks to the advancements in prevention, diagnosis and treatment life expectancy has improved both in developed and developing countries. Now with the advent of the new genetic knowledge average life expectancy is predicted to be around 90 years at least in the wealthier nations.

Twentieth century has seen some of the greatest advances in science and medicine. Antibiotics, insulin, vaccines, transplant medicine, renal medicine, scanning technology, cardiovascular medicine and cancer treatment are some of them. Increased life expectancy due to these advances in medicines has resulted in a large elderly population living with chronic diseases or disabilities. This has great social, political and economic consequences. In a welfare state the government has a duty to look after its citizens from cradle to grave. Apart from the cost of expensive medicines and treatment for chronic diseases, the cost of social services, social security and old age pension is also to be considered in the context of economics and health.

The idea of "Welfare State" means different things in different countries. In the ideal model the state accepts responsibility for the provision of comprehensive and universal welfare for its citizens. This includes: Social services, Social security, Health care and Old age pension.

In Europe, Germany was the first country to start a social security under its first chancellor Otto Bismarck in 1879. Inspired by the social changes in Germany Lloyd George, prime minister of Britain from 1916 to 1922 laid the foundation of British welfare state by starting health and unemployment insurance through national insurance act. But the architect of the post World War II welfare state of Britain is William Beveridge. Beveridge was an economist and civil servant and his comprehensive report to the then government was

the blue print for the modern welfare state. National Health Service is considered to be the jewel in the crown of British welfare state and was founded by the then Labour health minister Aneurin Bevan in 1948.

British Welfare System

Following is a brief account of the British welfare state. The system is funded by taxation and national insurance. The basic rate of tax in UK is 22% and higher rate is 40%. In addition there is compulsory National insurance contribution for both employers and employees. Also there is a local government tax known as council tax and is dependent on the size of the house. About 50% of the national budget is spent on health, social security and local government services.

British health care system is based on the family doctor principle. Every citizen in UK has to be registered under a family doctor otherwise called as General Medical Practitioner. Average list size of general practitioner is 2000 patients in England. General practitioner is the team leader for the primary care team. Other members of the team are health visitors, midwives, district nurses, community psychiatric nurses and practise nurses. General practitioners practice from small clinics or purpose built health centers. The average general practitioner sees about 30 patients per day. In addition there is house visits for the elderly and house bound patients. Considerable time is spent on prevention and a General Practitioner's remuneration is based on list size and attainment of certain targets in chronic diseases like diabetes, heart disease, asthma and stroke. Hospitals provide specialist services for patients referred by the General Practitioners. There is no direct access to specialist services with the exception of accident and emergency services and Sexually Transmitted Diseases. Average waiting time to see a specialist is 2-3 months with the exception of suspected cancer, heart dis-

ease and certain conditions marked as urgent by General Practitioner. One negative aspect of the British system is the long waiting time to see a specialist and the longer waiting time for routine surgical procedures. In spite of these problems the British system is unique in that every citizen in UK, whether rich or poor, is provided with free medical care based on the clinical need rather than the ability to pay for the service. Though Britain is a capitalistic society one can say that there is socialism in medical care. Private medical care is very rare in UK and is used mainly for less urgent surgical procedures with long waiting lists. In general the vast majority of the population relies on the National Health Service. Unlike countries with private insurance system with provision of care in private hospitals there is no element of commercialization of health care in NHS.

Another aspect of welfare state is social security system giving financial help for unemployed in the form of job seekers allowance, housing benefit, sickness benefit, child benefit, maternity benefit, disability benefit and attendance allowance. People on state benefits, children, elderly and the unemployed are eligible for free prescriptions for any illness. While the health care and social security are under the central government social services are under local government also called county council or district council. School, social service, fire service, ambulance, police, environmental health, housing for the poor and facilities for recreation are some of the functions of the local governments. Social services provide services for the elderly, children at risk, young disabled and the mentally ill. All developed countries have higher elderly population living with multiple disabilities. It is the duty of the social services to make sure that their needs are met. Many elderly people live alone with the help of carers from social services. Residential and nursing homes look after the very old who are unfit to live

alone. Though most of the care homes are now private, social services pay for the poor elderly who cannot afford to pay. Some aspects of the services for the elderly like home help, meals on wheels (delivery of mid-day meal) and care homes are means tested.

In UK state pension age for men is 65 years and 60 years for women. State pension is very basic and hence additional pensions in the form of occupational pension and private pensions are essential for a comfortable retirement. Self-invested personal pension scheme or SIPP is the latest private pension scheme introduced by the government to encourage the public to save for the retirement.

Wealth of a nation is dependant on the industrial output of the country. Doctors and nurses who work in the industrialized countries are familiar with the industrial diseases like pneumoconiosis, asbestosis, certain types of cancers, deafness, asthma, chronic bronchitis, dermatitis and stress related illness. In the 21st century there are preventive measures to deal with these problems and also compensation for those who develop these illnesses. But in the 19th and early 20th century the conditions in the factories and mines were dangerous and unhealthy. The Socialist movement was very active in Europe during that period. The policymakers of Western Europe were very keen to prevent a Marxist revolution as in Eastern Europe and hence the birth of the welfare state. In the present century all the developed nations have varying level of welfare systems. In general countries in the Western Europe have a more comprehensive level of welfare programmes than USA. In the USA health care is funded by private insurance which is usually done by employers. It is estimated that there are about 46 million people without any form of insurance. These are people with the lowest income and people with chronic diseases for whom private health insurance is unaffordable. There are state funded health care programmes for these people and also

charitable health care but the standard of care is not ideal and varies between the states.

Regulatory Bodies

One notable feature of any developed country is the regulatory bodies and systems to protect the public from wrong treatment by incompetent and unethical doctors. In UK the newly qualified doctor has to undergo a minimum of four years training before practising as a GP and specialist training being much longer. Lifelong learning and annual appraisal is a requirement now and five yearly revalidation is going to be mandatory for all practising doctors in UK. National Institute of Clinical Excellence provides guidance and information on evidence based medicine and it is free for all doctors. Clinical governance is a new word in British medicine and it aims to achieve the highest standards in medical practice. Complaints procedure and medical indemnity insurance are other aspects which protect the public from wrong treatment or medical negligence.

Chronic diseases like stroke, cancer, kidney disease, heart disease and AIDs are a financial burden for the developed and developing countries. In addition there is a rising elderly population who needs medical and social care. At present there are no ideal solutions to these problems. There are many expensive drugs for chronic diseases with the possibility of prolonging life or even "CURE" in some conditions. In developed countries with private health care system the insurance premium goes up if a person develops a chronic disease or the person becomes uninsurable in some cases. In health care system funded by taxation, increased taxation remains the only option to provide a comprehensive level of cover. The state of affairs in developing countries is no comparison to the developed countries. Though there are free government funded health services in many poor countries the facilities are very basic and cannot provide high

standard of care as in developed countries. India has made great progress in health care over the last 20 years mainly in the private sector. Though the public spending in health care in India is among the lowest in the world India is in the top league for private spending, among the top 20 countries in the world. This has encouraged medical tourism from wealthier countries including UK and USA. Unfortunately high quality health care is unaffordable

for the local population and the average person is not covered by private insurance and hence ordinary people have to sell their assets to get treatment if they develop life threatening illness. The concept of welfare state remains a dream for most developing countries. Probably the world needs more Bill Gates models of charity to save the developing countries and the poorer section of the developed countries. ■

Indian Migration to the Gulf

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Since the mid 1970s a large number of Indian workers have migrated to the West Asian countries for employment. The migration which started with a few thousands per year during the mid 1970s assumed large proportions during 1980s and 1990s. The Report on High Level Committee has estimated the total Indian migrants in the Gulf countries viz. Bahrain, Kuwait, Libya, Oman, Qatar, Saudi Arabia, UAE and others as 30 lakh in 1999. According to the committee, Saudi Arabia had the largest number of Indian migrants (12 lakh) in the Gulf region. Migration to the West Asian countries is crucial because India is receiving a large amount of workers' remittances every year.

Categories of Migrants

Different categories of people migrate for different purposes. Migrants are classified into the categories such as foreigners admitted for special purposes; settlers; migrant workers, economic migrants and asylum migrants. The foreigners admitted for spe-

cial purposes are foreign students, foreign trainees and foreign retirees. Settlers are persons who are granted the right to stay indefinitely in the territory of a country other than their own and to enjoy the same social and economic rights as those of the citizens of that country. Migrant workers are persons admitted by a country other than their own for the explicit purpose of carrying out an economic activity. The category of migrant workers includes seasonal migrant workers, project-tide migrant workers, contract migrant workers, temporary migrant workers, established migrant workers and highly skilled migrant workers. A unique characteristic of migration to Gulf is contract type.

Contract migration occurs when a worker is officially granted permission to enter another country and take up employment in a given job and where a contract is entered into on his behalf or between him and the employer or enterprise for which he is to work. Contract itself takes several forms like individual contract and collective contract. In contract migration, return is an essential

part of the migration process. Here the workers are hired for contractual jobs for a definite time period and expected to return after the expiry of the period. Usually during the period of stay abroad they leave their families behind in their home country. In order to support their family, the emigrants send remittances on a regular basis. The economic impact of contract migration will be substantial on the domestic economics of the labour exporting countries compared to the settlement type of migration.

Labour Market situation in the Gulf countries

The discovery of vast resources of oil and their exploitation since the late 1960s is the basic and driving force that has been responsible for the phenomenal changes that have taken place in most of these countries in the last four decades. Saudi Arabia, for instance, is credited with having 25% of the proven oil reserves of the world. Most of the other Gulf states have enough oil resources to keep their relatively small economies on the path to prosperity. The rise in oil prices in 1973 led to a very rapid increase in the revenues accruing to the oil producing countries of the Gulf. This accelerated a process of industrialization and social change in these countries characterised by massive investment in social and economic infrastructure necessitating the services of large number of foreign workers.

The entire region is sparsely populated, Saudi Arabia and Iraq being the only Gulf countries with relatively large populations of almost 22 and 23 million, respectively. As for the others, the corresponding figures range from barely half a million to about two and a half. Consequently, these countries experienced an acute shortage of workers. This shortage is all the more endemic in the case of professionals like highly qualified doctors to man their well-equipped hospitals, as well

as engineers, architects, chartered accountants, bankers etc. There is also a tremendous dearth in these countries of highly skilled and even semi-skilled and unskilled workers. Such personnel are essential for the construction of the new housing, commercial and industrial structures and for the implementation of numerous other infrastructure schemes. To meet these demographic and skills shortages, the region has had to import hundreds of thousands of personnel from many other countries.

As the Arab nationals prefer employment in well-paid government positions, they have ensured that they would have the assistance of qualified foreign technicians and experts to perform the risks that they themselves ought to be doing. There is reluctance on the part of most citizens in the Gulf to undertake any semi-skilled, unskilled or menial jobs and a huge foreign workforce has had to be recruited to develop infrastructure and other development projects. There are no ceiling for the recruitment of domestic help such as housemaids, gardeners, cooks, bearers and such other personnel. In fact, there has been an unfortunate mismatch between the large scale unemployment of such workers in their home countries and the enormous demand for them in the Gulf. The result has been a tendency on the part of employers in some of the countries of the region to treat their domestic help with scant regard for their welfare.

The highly paid professionals are also usually fortunate enough to be permitted to take their families with them to the Gulf as their monthly emoluments are more than the variously prescribed minimum. On the other hand, the low paid categories of workers are not allowed to bring their families with them. The low paid workers particularly those who are semi-skilled or unskilled, are accommodated in crowded labour camps

in small rooms with four to eight bunker beds. The facilities provided to them such as toilets and kitchens are inadequate and unsatisfactory. Generally, the living conditions and amenities provided by the large corporations are better than the facilities extended by small companies and individual employers.

Foreign nationals are not permitted to own any business or immovable property in the Gulf countries. They are required to make a local citizen or entity a majority even if sleeping partner in their enterprises. With this type of an arrangement they were able to promote investment, production and generation of new wealth. Citizenship is almost universally not granted by the Gulf countries to foreign nationals. Hereditary monarchial regimes have traditionally administered all the Gulf countries. Even though some of them may have features such as an elected legislature or an Advisory Council, the executive and legislative powers invariably vest in the hereditary monarch in each of them.

Trends in Indian Emigration to the Gulf

We do not have accurate data relating to annual outflows or return flows of Indian labour and stocks of Indian emigrants in different foreign countries. The basic source of statistics about labour outflows is the data provided by the Protector General of Emigrants (PGE) in the Ministry of Labour of the Government of India. In the absence of well-regulated rules and procedures for recruitment, we find the statistics on emigration clearance and employment abroad and the annual outflows for the period till 1983, quite unreliable. After the implementation of the Emigration Act 1983, the collection of statistics on migrant flows became more systematic. But the exclusion of a number of categories of emigrants due to exemption given under Emigration Check Not Required (ECNR) has resulted in the partial coverage of the labour outflows. The workers who

require emigration clearance are mostly farm workers, but include unskilled, low skilled and semi-skilled categories of workers also. The categories of persons exempted from emigration clearance are educated, trained, gazetted government servants, income tax payers, professional degree holders, persons who had stayed abroad for more than three years and professionals such as supervisors and skilled workers. Owing to these reasons, the data on the labour outflows give only a partial account of the emigrants from India.

Based on data of the annual outflows of labour from India between 1984 and 1999, we divide the period into three phases. The first phase covers the period between 1984 and 1991, which witnessed an annual volume of emigration ranging between 1.14 lakh and 2.06 lakh. The second phase is the first half of the 1990s (1992-1997) when the annual outflow of labour was more than 4 lakh. The third phase started since 1998 when a fall began in the annual volume of emigration (Table 1).

Table 1: Number of Workers Granted Emigration Clearance, India

| Year | Number of workers
(in lakh) | Growth (%) |
|------|--------------------------------|------------|
| 1984 | 2.06 | - |
| 1985 | 1.63 | -20.87 |
| 1986 | 1.14 | -30.06 |
| 1987 | 1.25 | 9.65 |
| 1988 | 1.70 | 36.00 |
| 1989 | 1.26 | -25.88 |
| 1990 | 1.44 | 14.29 |
| 1991 | 2.02 | 40.28 |
| 1992 | 4.17 | 106.44 |
| 1993 | 4.38 | 5.04 |
| 1994 | 4.25 | -3.06 |
| 1995 | 4.15 | -2.41 |
| 1996 | 4.14 | -0.24 |
| 1997 | 4.16 | 0.48 |

| | | |
|------|------|--------|
| 1998 | 3.55 | -14.66 |
| 1999 | 1.99 | -43.94 |
| 2000 | 2.43 | 22.11 |
| 2001 | 2.78 | 14.40 |
| 2002 | 3.68 | 32.37 |

Source: Various Annual Reports of Ministry of Labour, Govt. of India

The major reasons for the sharp decline in Indian migration since 1998 to the Gulf may be attributed to the drastic changes in the immigration policies of the host countries, aimed at reducing the inflows of foreign workers, the recession in the Gulf economies and the saturation of labour markets of the unskilled and semi-skilled categories. These countries began to follow a policy of replacing many categories of foreign workers with their native workforce. They introduced, what is known as a demographic balance policy, a policy of not allowing foreign workers of any single country to dominate the migrant workforce in a given destination country.

Destination

The important destinations of Indian migrants to West Asia during the 1980s were Saudi Arabia, United Arab Emirates (U.A.E.), Oman and Bahrain. Table 2 gives the number of workers granted emigration clearance by destination. By 1990s, Saudi Arabia became the destination of majority of Indian emigrants. The destination of nearly one-fourth of Indian emigrants was Oman dur-

ing the year 1990. During 1990s a substantial change was visible in the directions of the flow of emigrants to West Asia. During the late 1990s the annual flow of unskilled and semi-skilled categories registered a decline in Saudi Arabia, U.A.E., Oman and Bahrain. On the other hand, there has been an increase in annual flow of unskilled and semi-skilled workers to Kuwait. But the available data suggest that there has been a spurt in annual flow of the unskilled and semi-skilled categories in the year 2002 compared to the previous years.

The major categories of workers who migrated include unskilled and skilled construction workers and other skilled workers. The skilled construction workers comprised categories such as carpenter, electrician, fitter, foreman, mason, painter, plumber, welder, surveyor, and supervisor. The other skilled workers include cook, driver, mechanic, machine operator, and tailor. The rest included engineers and technicians, paramedical staff and office staff.

A state wise break up of the number of workers granted emigration clearance shows that Kerala, Tamil Nadu, Andhra Pradesh, Maharashtra, Rajasthan and Punjab are the States from where large number of persons has migrated to the Gulf. Table 3 gives the statewide distribution of number of workers granted emigration clearance between 1995 and 2002.

Table 2: Number of Workers Granted Emigration Clearance by Destination

| Country | 1990 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|--------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Bahrain | 6,782 | 11,235 | 16,647 | 17,944 | 16,997 | 14,905 | 15,909 | 16,382 | 20,807 |
| Kuwait | 1,077 | 14,439 | 14,580 | 13,170 | 22,462 | 19,149 | 31,082 | 39,751 | 4,859 |
| Oman | 34,267 | 22,338 | 30,113 | 29,994 | 20,774 | 16,101 | 25,155 | 30,985 | 41,209 |
| Saudi Arabia | 79,473 | 2,56,782 | 2,14,068 | 2,14,420 | 1,05,239 | 27,160 | 59,722 | 78,048 | 99,453 |
| U.A.E. | 11,962 | 79,674 | 1,12,644 | 1,10,945 | 1,34,740 | 79,269 | 55,099 | 53,673 | 95,034 |
| Others | 10,004 | 30,866 | 26,162 | 29,951 | 54,952 | 42,968 | 56,215 | 5,98,25 | 1,06,301 |
| Total | 1,43,565 | 4,15,334 | 4,14,214 | 4,16,424 | 3,55,164 | 1,99,552 | 2,43,182 | 2,78,664 | 3,67,663 |

Source: Various Annual Reports of Ministry of Labour, Govt. of India

Table 3: Number of Workers Granted Emigration Clearances by Major States

| State | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|--------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| A. Pradesh | 30,284 | 29,995 | 38,278 | 30,599 | 18,983 | 29,999 | 37,331 | 38,417 |
| Karnataka | 33,496 | 33,761 | 40,396 | 11,535 | 5,287 | 10,927 | 10,095 | 14,061 |
| Kerala | 1,65,629 | 1,67,325 | 1,56,102 | 91,720 | 60,445 | 69,630 | 61,548 | 81,950 |
| Maharashtra | 26,312 | 25,214 | 25,146 | 24,657 | 9,871 | 13,346 | 22,713 | 25,477 |
| Punjab | 11,852 | 11,751 | 12,414 | 26,876 | 15,167 | 10,025 | 12,422 | 19,638 |
| Rajasthan | 28,374 | 18,221 | 28,242 | 19,824 | 9,809 | 10,170 | 14,993 | 23,254 |
| Tamil Nadu | 65,737 | 64,991 | 63,672 | 69,793 | 47,402 | 63,878 | 61,649 | 79,165 |
| Others | 53,650 | 62,956 | 52,174 | 80,160 | 32,588 | 35,207 | 57,913 | 85,701 |
| Total | 4,15,334 | 4,14,214 | 4,16,424 | 3,55,164 | 1,99,552 | 2,43,182 | 2,78,664 | 3,67,663 |

Source: Various Annual Reports of Ministry of Labour, Govt. of India

Stock of Indians in the Gulf

According to an estimate of the High Level Committee on Indian Diaspora, the number of Indian migrants increased from 5.31 lakh in 1979 to 15.05 lakh in 1991

and to 30 lakh in 1999. According to this committee Saudi Arabia, U.A.E., Oman, Kuwait and Bahrain are the major destinations of Indian migrants in Gulf region (Table 4).

Table 4: Estimates of Indian Migrants in the Gulf Region 1979-1999

| Countries | 1979 | 1983 | 1991 | 1999 |
|--------------|-----------------|-----------------|------------------|------------------|
| Bahrain | 26,000 | 30,000 | 1,00,000 | 1,50,000 |
| Iraq | 20,000 | 50,000 | N.A. | N.A. |
| Kuwait | 65,000 | 1,15,000 | 88,000 | 2,00,000 |
| Libya | 10,000 | 40,000 | 12,000 | 20,000 |
| Oman | 60,000 | 1,00,000 | 2,20,000 | 4,50,000 |
| Qatar | 30,000 | 40,000 | 75,000 | 1,00,000 |
| Saudi Arabia | 1,00,000 | 2,70,000 | 6,00,000 | 12,00,000 |
| U.A.E. | 1,52,000 | 2,50,000 | 4,00,000 | 7,50,000 |
| Others | 68,000 | 21,000 | 10,000 | 1,30,000 |
| Total | 5,31,000 | 9,16,000 | 15,05,000 | 30,00,000 |

Source: GOI, 2002, Report of the High Level Committee on the Indian Diaspora

During the last three decades, there had been much change in the destination of Indian emigrants in the Gulf region. During the 1970s, U.A.E. was the major destination of Indian migration. But during the subsequent decades Saudi Arabia became the principal destination. On the other hand,

there had been a decline in the Indian migration to Iraq and Libya during 1990s. According to the Committee 40 percent of the stock of Indian emigrants in the Gulf region was in Saudi Arabia, while the share of U.A.E. and Oman were 25 and 15 percent respectively (Table 5).

Table 5: Estimates of Indian Migrants in the Gulf Region 1979-1999 (Percentage)

| Countries | 1979 | 1983 | 1991 | 1999 |
|--------------|-------|-------|-------|-------|
| Bahrain | 4.89 | 3.27 | 6.64 | 5.00 |
| Iraq | 3.76 | 5.46 | N.A. | N.A. |
| Kuwait | 12.24 | 12.55 | 5.85 | 6.66 |
| Libya | 1.90 | 4.37 | 0.79 | 0.66 |
| Oman | 11.30 | 10.88 | 14.62 | 15.00 |
| Qatar | 5.65 | 4.37 | 4.92 | 3.33 |
| Saudi Arabia | 18.83 | 29.47 | 39.27 | 40.00 |
| U.A.E. | 28.62 | 27.29 | 26.53 | 25.00 |
| Others | 12.80 | 2.29 | 0.66 | 4.33 |

According to the Committee more than half of the total stock of Indian migrants in the Gulf region belong to Kerala. The remaining persons have mostly been from Andhra Pradesh, Goa, Karnataka and Tamil Nadu.

The Committee estimates that non Resi-

dent Indian Citizens (NRIs) account for 7 percent of the total population in Saudi Arabia. On the other hand, NRIs account for 32 percent of the total population of U.A.E., 13 percent of Kuwait, 15 percent of Oman, 20 percent of Bahrain and 24 percent of Qatar (Table (6)).

Table 6: Percentage of NRIs in the Total Population of Main Arab Countries in Year 2000

| Country | Population | No. of
NRIs | Perce
tage of
Popula
tion |
|-----------|-------------|----------------|------------------------------------|
| S. Arabia | 2,15,00,000 | 15,00,000 | 7 |
| U.A.E. | 28,00,000 | 9,00,000 | 32 |
| Kuwait | 22,00,000 | 2,87,600 | 13 |
| Oman | 22,00,000 | 3,40,000 | 15 |
| Bahrain | 6,43,000 | 1,30,000 | 20 |
| Qatar | 5,25,000 | 1,25,000 | 24 |

Source: GOI, 2002, Report of the High Level Committee on the Indian Diaspora

Current problems of NRIs in the Gulf countries

Of the total Indian migrants in the Gulf, majority of them are semi-skilled and unskilled workers getting lower wages. Most of them are denied the non-wage benefits entitled as per law. The High Level Committee estimates that of the total migrants 70 percent are semi-skilled and unskilled workers. And the white-collar workers was about 20 percent and professionals 10 percent.

The professional Indians and some of the white-collar workers are the only ones who qualify to have their families with them due to the high basic income norms set by the Gulf governments. To enjoy such a privilege in the U.A.E, for instance, the monthly earnings of an NRI must be not less than 4,000 Dirhams (about Rs. 48,000) or Dirhams 3,000 plus accommodation. In Kuwait, the qualifying minimum is even higher namely Kuwait Dinars 400 or Rs. 56,000 per month. Because of high ceiling on earnings, more than 80 percent of the Indian emigrants are not

allowed to bring their family members with them.

The living and working conditions of the unskilled and semi-skilled Indian workers in the Gulf leave much to be desired. A majority of these NRIs are young males. Over 60% of them have had little formal education. On arrival in their country of destination in the Gulf, they are usually fed and housed in barracklike tenements and engaged as labour on construction projects.

There are many unfortunate cases of recruiting agents duping illiterate job seekers, often in collusion with the prospective employers. As per prevalent practice, the employee is required to hand over his travel document to the employer on his arrival. The document is kept in the custody of the employer. Enabling him to exercise undue hold over the employee and to ignore or alter the terms of the employment.

The other current problems faced by the migrants in the Gulf countries are the following. (1) Non-compliance labour contract by

the employer after arrival. Denial of job, wages, non wage benefits as per the original labour contract. In many cases, forcing the skilled workers to do unskilled jobs with low wages. (2) Creating much hardships to the new migrants by the employers by not receiving them on arrival at airport after sponsoring visas. (3) Salaries are often not paid when due; sometimes not paid at all for several months towards the end of the contractual period, resulting in non receipt of salaries for the work done. (4) Practice of deducting the work permit fees from their meagre salaries.

(5) Forcing them to work long hours than the recognized 8 hours per day. (6) Non-payment of legitimate overtime dues. (7) Poor and unsatisfactory transportation arrangements for labourers from their camps to their worksites.

(8) Lack or inadequate medical facilities to the workers. (9) Non-payment of Airfare for return journey to India after two years as per labour rules. (10) Inaccessible labour courts for ordinary migrants who want to settle labour disputes. The mandate of the labour courts appears to be restrictive and it does not cover domestic help. (11) Ill-treatment and molestation of Indian women who were recruited as cooks or housemaids by the employers or agents sending them under false pretenses. Out of a total of 294,000 NRIs in Kuwait, about 113,000 of them are domestic servants and of them, about 49,000 are housemaids. (12). Severe stress leading to serious psychological problems and suicides. Concern for their families left behind in India, difficult living and working conditions, insecurity of jobs has often led to depression and melancholia, resulting in suicide in extreme cases. Shepherds and agricultural workers have to work in remote areas with minimal or no contact with the outside world. (13) Workers who

want to return to India on completion of their contracts, or due to an unforeseen emergency like sickness or death in the family often find that exit formalities are inordinately delayed (14) The usual practice in Gulf countries is to deposit the passport of the migrants with the employer. And employer refuses to give the passport to the worker when he wants it, thus creating much hardships. In some cases, when he changes the employer without his consent the worker becomes an illegal migrant.

More than 30 lakh NRIs are there in the Gulf countries. Of them nearly half are from the Kerala state. Though, there has been decline in the trend in migration during the late nineties the situation has changed since 2001. Of the total Indians in the Gulf, 70 percentage are semi-skilled and unskilled workers, 20 percent white-collar workers and 10 percent professionals. As majority of the Indian emigrants are semi-skilled and unskilled they receive low wages and face a host of problems. The lack of an effective labour dispute redressal system in the Gulf creates serious hardships to the Indian migrants. The majority of the Indian migrant workers also face a number of severe problems connected with their work and stay in the Gulf countries. ■

More Millionaires

The number of people globally with over \$ 1 million assets rose by 6.5% in 2005 to touch 8.7 million, according to Merrill Lynch. South Korea witnessed the highest growth of 21.3% in the number of high net worth individuals. India was second with a 19.3% growth. The number of millionaires stood at 2.4 m. in Asia Pacific, 2.8 m. in Europe and 2.9 m. in North America.

Industry

The introduction of the New Industrial Policy of deregulation, delicensing and disinvestment has opened a new environment in the country. A significant number of industries in the public sector are now thriving alongside many industries in the private sector. Often Foreign Direct Investors are setting new trends on a competitive playing field. The overall growth in the General Index during 2002-03 has been 5.8%.

Steel

India is the 9th largest steel producing country in the world. The annual growth rate of crude steel production in 2002-03 was 8% and in 2003-04, 6%. The apparent consumption of the finished steel was 30.265 m tonnes in 2003-04. India also annually imports 1.5m tonnes of steel. During 2003-04 India exported 5.3 million tonnes of steel in the form of plates, bars and rods, rolled coils, colour coated sheets, pig iron, sponge iron, GP/GC sheets, etc.

India has once again emerged as the largest producer of sponge iron in the world for the calendar year 2004-05 with a record production of 8.085 million tonnes, showing a significant growth of 17.5%.

Textiles

The textile's strong presence in the Indian economy adds up to 14% to the industrial production and about 4% to the GDP. It together with allied agricultural sector will provide employment to over 91 million people by the end of 2007.

The handloom sector constitutes 14% of the total cloths produced. The production of

the handloom fabrics has registered a 10 fold increase from a mere 500 m sq. metres in 1950s to 5524 million sq. metres in 2002-03. The contribution of the powerloom sector is to the extent of 62%. Cotton accounts for more than 75% of the total fibre consumption in the spinning mills and more than 56% of the total fibre consumption in the textile sector. India tops in production of raw jute and jute goods and second in export of jute goods. About 4 million farmers are engaged in the cultivation of jute and mesta and about 2.61 lakh workers employed in the jute industry.

India is the second largest producer of raw silk. The Industry employs 54 lakh persons. The raw silk production in 2004-05 was 15,785 MT. There are five varieties of silk and India is the only country in the world which produces all the 5 commercial varieties, namely, Mulberry, Tropical Tasar, Oak Tasar, Eri and Muga.

Indian handicrafts have a wide range of things made up of bamboo, cotton, silk, jute, cane, metals, glass-work, and much more. Exports of handicrafts including hand-knotted carpets were of the order of Rs. 15255.90 crore during 2004-05 representing 19.51% over the previous year.

Cement

Cement is one of the most advanced industries in the country. As on 30 April, 2005, there were 128 large cement plants with an installed capacity of 144.98 million tonnes per annum. There are more than 300 small cement plants with an estimated capacity of 11.10 million tonnes per annum.

The production during 2004-05 was 131.56 million tonnes with a growth rate of 6.52%. In 2004-05, India exported 10.06 million tonnes (prov.)

Leather

The small scale, cottage and artisan sector account for over 75% of the total leather production. India, in this sector, has big advantage in terms of cheap raw material and skilled manpower. Besides most of the people employed in this industry are predominantly from minority communities and disadvantaged sections of the society. About 30% of the work force employed here constitute women. In 2004-05, India exported leather worth Rs. 9,749 crore.

Fertilisers

India is the third largest producer of nitrogenous fertilisers in the world. There are 57 fertiliser units manufacturing a wide range of nitrogenous and complex fertilisers, including 29 units producing urea and nine units producing ammonium sulphate as by-product.

The production capacity of nitrogen has increased from a modest 85,000 tonnes in 1951-52 to 120.31 lakh tonnes in terms of nitrogen. The production target for 2005-06 has been fixed at 118.07 lakh tonnes of nitrogen and 47.02 lakh tonnes of phosphate.

Paper and Newsprint

In 2003, there was an installed capacity for nearly 6.2 million tonnes of paper and paperboard and about 1.24 m tonnes of newsprint. The Indian industry is ranked 15th among the world top ranking paper industries. The industry is fragmented with installed capacity ranging from two tonnes to 600 tonnes. Its turnover is about Rs. 16,000 crore, employing nearly three lakh people directly and 10 lakh people indi-

rectly. The per capita consumption of paper in India is still 5.5kg. The world average per capita consumption is 50kg.

Small and Medium Enterprises

As per the Third All India Census of SSIs (Registered and Unregistered units) held for the year 2001-02, there were 105.21 lakh SSI units in the country, out of which 13.75 lakh were registered working units and 91.46 lakh unregistered units. Their contribution to production was Rs. 2,82,270 crore and to employment at 249.09 lakh persons. It is estimated that during 2004-05, the number of SSI units has increased to 118.59 lakh from 113.95 lakh in the previous year registering a growth of 4.7 per cent. The value of production at current prices by the SSI units also increased by 13.95 per cent to 4,07,630 crore from Rs. 3,57,733 crore during 2003-04.

FMCG Industry

THE Rs. 41,000-crore Indian Fast Moving Consumer Goods (FMCG) industry appears to be fatigued, after robust growth in the early 1990s. Growth rates in the larger categories such as soaps, detergents and toothpastes, which already reach out to the bulk of Indian consumers, have been declining since 2000. The challenges of the slowdown have brought some tangible benefits to the consumer as also to the industry. They are: consumers now drive a better bargain with lower prices and freebies; cost structure and pricing is crucial; and competitive marketing strategies offer better value to its consumers.

The slow down, accompanied by significant changes in the business environment over past few years, has led to significant upheavals within the FMCG industry. It has not only weakened the dominance of the large MNCs operating in the Indian FMCG and challenged their pricing power but also widened the basket of choices for consumers.

Planning

Planning is the key to development for a developing country. For a mixed economy like India where both Public sector and Private sector exist alongside in the nation building process, the aim of the planning process is to offer quality of life to its citizens. In a welfare state equal opportunity in terms of education and employment, equitable distribution of wealth, health and social security are crucial.

To that end, in India we have the Planning Commission (constituted in March 1950), National Planning Council (established in 1965), and National Development Council.

The Five Year Plans are drawn by the Planning Commission. Besides there have been three Annual Plans - (a) 1966-67 to 1968-69 (Plan holiday during War with China and Pakistan); (b) 1978-79 to 1979-80 (during Janata Government); and 1990-91 to 1991-92 (to bring about maximum employ-

ment and social transformation).

Highlights of 10th Plan

- Doubling of Per capita Income in 10 years
- Achieving growth rate of 8% of GDP per annum
- Reduction of poverty from 26 to 21% by 2007
- Decadal population growth to be reduced from 21.3% (1991-2001) to 16.2% in 2001-2011
- Growth in gainful employment to keep pace with the addition to labour force
- All children to be in school and 5 years schooling by 2007
- Reduce gender gaps in literacy and wage rates by 50%
- Literacy Rate to be increased from 65% to 75% by 2007
- Providing potable drinking water in all villages
- Infant Mortality Rate to be reduced from 72 (1999-00) to 45 in 2007
- Maternal mortality ratio to be reduced from 4 (1999-00) to 2 in 2007
- Increase in forest/tree cover from 19% (1999-00) to 25% in 2007
- Cleaning of major polluted river stretches.

| 5-year Plan | Period | Outlays | | | Total |
|-----------------|-----------|-----------|-----------|---------|-----------|
| | | Centre | States | UTs | |
| 1. First Plan | 1951-56 | 1241.00 | 828.00 | - | 2069.00 |
| 2. Second Plan | 1956-61 | 2559.12 | 2240.88 | - | 4800.00 |
| 3. Third Plan | 1961-66 | 3600.00 | 3725.00 | 175.00 | 7500.00 |
| 4. Fourth Plan | 1969-74 | 8870.00 | 6606.47 | 425.00 | 15902.16 |
| 5. Fifth Plan | 1974-79 | 19954.10 | 18265.08 | 634.06 | 38853.24 |
| 6. Sixth Plan | 1980-85 | 47250.00 | 48600.00 | 1650.00 | 97500.00 |
| 7. Seventh Plan | 1985-90 | 95534.00 | 80698.00 | 3768.00 | 180000.00 |
| 8. Eighth Plan | 1992-97 | 247865.00 | 179985.00 | 6250.00 | 434100.00 |
| 9. Ninth Plan | 1997-2002 | 489361.00 | 369839.00 | * | 859200.00 |
| 10. Tenth Plan | 2002-07 | | | | |

Note : First Plan total outlay is the 1952 Original Plan Provision; The Fifth Plan total outlay excludes Rs. 450.00 crores for Hill and Tribal Areas; Outlays are at prices at base year of Plan; * The State Outlay for Ninth Plan includes the figures for UTs.

Tenth Five-year Plan (2002-07) was approved by National Development Council on 21 Dec 2002.

The largest share (about 96 per cent) in the total geological resources is accounted by Cuttak district in Orissa. Deposits of economic significance occur in Orissa, Kamataka, Maharashtra, Jharkhand, Madhya Pradesh, Chhattisgarh, Tamil Nadu and Manipur. However, refractory grade reserves of chromite are very meagre.

Copper: The total in situ reserves of copper ore in the country are 712.5 million tonnes equivalent to 9.4 million tonnes of metal content. The all-India conditional resources of copper are 722 million tonnes, (3.16 million tonnes of copper metal) and prospective resources are 0.6 million tonnes of copper ore. Major and important copper ore deposits are located in Singhbhum district (Jharkhand), Balaghat district (Madhya Pradesh) and Jhunjhunu and Alwar districts (Rajasthan). In addition, there are small copper ore deposits in Gujarat, Kamataka, Andhra Pradesh, Uttar Pradesh, Sikkim, Meghalaya, Maharashtra and West Bengal.

Gold: There are 3 important gold fields in the country, namely, Kolar Gold Field, Kolar district, Hutti Gold Field in Raichur district (both in Kamataka) and Ramgiri Gold Field in Anantpur district (Andhra Pradesh). Total in situ reserves of gold ore are estimated at 222.4 million tonnes, with 116.50 tonnes of metal.

Iron Ore: The total in situ reserves of iron ore in the country are about 12,317 million tonnes of haematite and 539.5 million tonnes of magnetite. The resources of very high grade ore are limited and are restricted mainly in Bailadila sector of Chhattisgarh and to a lesser extent in Bellary-Hospet area of Kamataka and Barajamda sector in Jharkhand and Orissa. Haematite resources are located in Orissa, Jharkhand, Chhattisgarh, Kamataka, Goa, Maharashtra, Andhra Pradesh and Rajasthan. Magnetite resources are located in Kamataka, Andhra Pradesh, Goa, Kerala, Jharkhand, Rajasthan and Tamil Nadu.

Lead-Zinc: Lead-Zinc resources are located in Rajasthan, West Bengal, Andhra Pradesh, Gujarat, Madhya Pradesh, Uttar Pradesh,

Orissa, Maharashtra, Meghalaya, Tamil Nadu and Sikkim. Total in situ reserves (all grades) of lead and zinc ores are 231.22 million tonnes comprising metal content of 5.1 million tonnes of lead and 17.01 million tonnes of zinc metal.

Manganese: The total in situ reserves of manganese ore are 406 million tonnes out of which 104 million tonnes are proved, 135 million tonnes are probable and 167 million tonnes are in possible categories. Main reserves fall in Kamataka, followed by Orissa, Madhya Pradesh, Maharashtra and Goa. Minor occurrences of manganese are in Andhra Pradesh, Jharkhand, Gujarat, Rajasthan and West Bengal.

Nickel: The total estimated conditional resources of nickel ore are 188.7 million tonnes located in Orissa (174.48 million tonnes) and Jharkhand (9 million tonnes).

Tungsten: The total in situ reserves of tungsten ore have been estimated at 43.15 million tonnes or 1,32,478 tonnes of W03 content. The main reserves are at Degana, Rajasthan. It also occurs in Maharashtra, Haryana, West Bengal and Andhra Pradesh.

Barytes: The in situ reserves of barytes are 85.29 million tonnes. The Mangampet deposit occurring in Cuddapah district (Andhra Pradesh) is the single largest deposit in the world. Minor occurrences of barytes are located in Rajasthan, West Bengal, Chhattisgarh, Madhya Pradesh, Tamil Nadu, Maharashtra, Uttar Pradesh, Jharkhand, Himachal Pradesh and Kamataka.

Diamond: Diamond deposits occur in three types of geological settings such as kimberlite pipes, conglomerate beds and alluvial gravels. The main diamond bearing areas in India are Panna belt in Madhya Pradesh, Munimadugu-Banganapalle conglomerate in Kumool district, Wajrakarur kimberlite pipe in Anantapur district and the gravels of Krishna river basin in Andhra Pradesh. Reserve have been estimated only in Patina belt and Krishna Gravels in Andhra Pradesh. The total in situ reserves are about 26,43,824 carats. There are conditional resources of 19,36,512 carat. The new kimber-

fields are discovered recently in Raichur-Ibarga districts of Karnataka.

Dolomite: Dolomite occurrences are widespread in almost all parts of the country. The total in situ reserves of all grades of dolomite are 7,348 million tonnes. The major share of about 90% reserves is distributed in the states of Madhya Pradesh, Chhattisgarh, Orissa, Gujarat, Karnataka, West Bengal, Uttar Pradesh and Maharashtra. The reserves of BF and SMS grades are large, but those of refractory grade 425 million tonnes constitute only 5.8% of the all India reserve.

Fire Clay: Fireclay occurs as a bedded deposit, mostly associated with coal measures of Gondwana and Tertiary periods. Important deposits are associated with Jharia and Raniganj coalfields in Jharkhand and West Bengal, Korba coalfield in Chhattisgarh and Neyveli Lignite field in Tamil Nadu. Notable occurrences of fireclay not associated with coal measures are known in Gujarat, Jabalpur region of Madhya Pradesh and Belpahar-Sundergarh areas of Orissa. The in situ reserves of fireclay are about 1,06 million tonnes.

Fluorspar: Total in situ reserves of fluor-spar in India are 14.15 million tonnes. Commercial deposits of fluorspar are located in Gujarat, Rajasthan, Madhya Pradesh and Maharashtra.

Gypsum: The in situ reserves of gypsum are estimated at 383 million tonnes. Out of this 1.8 millions are of surgical/ plaster grade, 91.7 million tonnes of fertiliser / pottery grade, 76.37 million tonnes of cement/ paint grade, 13 million tonnes of soil reclamation grade and the rest is unclassified. The production of gypsum is confined to Rajasthan, Tamil Nadu, Jammu and Kashmir, and Gujarat. Rajasthan is the main producer of gypsum followed by Jammu and Kashmir.

Graphite: The in situ reserves of graphite are 15.9 million tonnes. Orissa is the major producer of graphite. Almost the entire reserves of Tamil Nadu under proved category are in

Ramanathapuram district. Deposits of commercial importance are located in Andhra Pradesh, Jharkhand, Gujarat, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Rajasthan and Tamil Nadu.

Ilmenite: The in situ reserves of ilmenite are 374.62 million tonnes. Ilmenite occurs mainly in beach sand deposits right from Ratnagiri (Maharashtra) to coast in Kerala, Tamil Nadu and Orissa. The mineral is also found in Andhra Pradesh, Bihar, and West Bengal.

Kaolin: The all India in situ reserves of kaolin, including white clay of all categories are about 2,353 million tonnes. Principal producing states are Kerala, West Bengal, Bihar, Rajasthan and Gujarat. Ball clay is mainly produced in West Godavari district of Andhra Pradesh and Bikaner district of Rajasthan.

Limestone: The total in situ reserves of limestone of all categories and grades are placed at 1,69,941 million tonnes. The total conditional reserves have been estimated at 3,713 million tonnes. The major share of its production comes from Madhya Pradesh, Chhattisgarh, Andhra Pradesh, Gujarat, Rajasthan, Karnataka, Tamil Nadu, Maharashtra, Himachal Pradesh, Orissa, Bihar, Uttaranchal and Uttar Pradesh. The remaining part comes from Assam, Haryana, Jammu and Kashmir, Kerala and Meghalaya.

Mica: India is the world's leading producer of sheet mica and accounts for about 60 per cent of global mica trade. Important mica bearing pegmatite occurs in Andhra Pradesh, Jharkhand, Bihar, Rajasthan. The total in situ reserves of mica in the country are placed at 59,065 tonnes. The in situ reserves of mica in Andhra Pradesh are 42,626 thousand tonnes, Bihar 12,938 tonnes, Jharkhand 1,494 tonnes and in Rajasthan 2,006 tonnes.

Magnesite: The total in situ reserves of magnesite are about 415 million tonnes of which 75.8 million tonnes are in the proved category. Major deposits of magnesite are found in Uttaranchal, Tamil Nadu and Rajasthan while minor occurrences are in Jammu and Kashmir, Karnataka, Himachal Pradesh and Kerala.

Kyanite and Sillimanite: The total in situ reserves of kyanite and sillimanite in the country are 8.1 million tonnes and 58.8 million tonnes respectively. Besides, conditional resources of 95.3 million tonnes of kyanite are also estimated. For sillimanite, conditional resources are estimated to be 5.9 million tonnes. Kyanite deposits are located in Maharashtra, Karnataka, Jharkhand, Rajasthan, and Andhra Pradesh. Sillimanite resources are in Tamil Nadu, Orissa, Kerala, Andhra Pradesh and West Bengal with minor occurrences in Assam, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Meghalaya and Rajasthan.

Phosphate Minerals: Deposits of phosphorites are located in Madhya Pradesh, Rajasthan, Uttaranchal, UP. and Gujarat. Besides, apatite deposits of commercial importance are reported from Jharkhand, West Bengal, Andhra Pradesh, Tamil Nadu and

Rajasthan. In situ reserves of phosphorites are estimated at 193.23 million tonnes of all grades and of apatite at 14.83 million tonnes.

Other Minerals: Other minerals occurring in significant quantities in India are bentonite (Rajasthan, Gujarat, Jharkhand and J&K), corundum (Karnataka, Andhra Pradesh, Rajasthan and Chhattisgarh), calcite (Andhra Pradesh, Rajasthan, Madhya Pradesh, Tamil Nadu, Haryana, Karnataka, Uttar Pradesh and Gujarat), fuller's earth (Rajasthan, Jharkhand, Bihar, Andhra Pradesh, Tamil Nadu, Maharashtra, West Bengal and Karnataka), gamet (Tamil Nadu, Orissa, Andhra Pradesh, Rajasthan and Kerala), pyrites (Jharkhand, Rajasthan, Karnataka, Himachal Pradesh and Andhra Pradesh), steatite (Rajasthan, Uttar Pradesh, Kerala, Maharashtra and Madhya Pradesh), wollastonite (Rajasthan and Gujarat), zircon (beach sand of Kerala, Tamil Nadu, Andhra Pradesh and Orissa).

Energy Scenario

The social and economic development of a country owes a lot to the development of energy resources of that country. Development of conventional forms of energy for meeting the growing energy needs of society is the responsibility of the government. The Ministry of Non-conventional Energy Sources is now actively engaged in the development and promotion of non-conventional/ alternative/ new and renewable sources of energy such as solar, wind and bio-energy etc.

Power development in India started at the end of the 19th century with the commissioning of electricity supply in Darjeeling during 1897. It was soon followed by the commissioning of a power station at Sivasamudram in Karnataka during 1902.

The installed power generation capacity in the country has increased from 1,400 MW in 1947 to 1,18,419.09 MW as on 31 March 2005 comprising 80,902.45 MW thermal, 30,935.63 MW hydro, 3,811.01 MW wind and 2,770 MW nuclear. A capacity addition programme of 6,344.52 MW has been fixed for the year 2005-06. Power generation during 2004-05 was 587.366 8Us comprising 486.031 8Us thermal, 84.497 8Us hydro. The target of power generation for 2005-06 has been fixed at 621.500 8Us.

Coal is the main source of energy in the country and accounts for about 67 percent of the country's commercial needs. Coal is an important input in steel and carbo-chemical industries. As on 1 January 2005, coal reserves

of India (down to depth of 1200 metres) have been estimated at 2,47,847 million tonnes.

Lignite reserves in India have been estimated at around 36,009 million tonnes. Lignite reserves have been identified in Rajasthan, Gujarat, Jammu and Kashmir and Kerala to the extent of 3,845 million tonnes, 1,816 million tonnes, 128 million tonnes and 108 million tonnes respectively.

The importance of increasing the use of renewable energy sources was recognised in the country as far back as the 1970s. The country has developed a very large programme for renewable energy. It covers almost all major renewable energy sources such as biogas, biomass, solar energy, wind energy, small hydro power and other emerging technologies. The Ministry of Non-conventional Energy Sources created in 1992 is the nodal agency of the government for all matters relating to non-conventional / renewable energy.

India receives 5000 trillion kwh of solar radiation per year. Most parts of the country have 300 clear sunny days in a year. It is possible to generate 20 MW solar power per square kilometer land area. Solar energy is being tapped for a variety of applications like cooking, water heating, drying of farm produce, water pumping home and street lighting, power generation for meeting decentralised requirements in villages, schools and hospitals.

India now ranks fifth in the world in wind power capacity after Germany, USA, Denmark and Spain. The gross wind power potential of India is estimated to be about 45,000 MW, while the present technical potential is limited to about 13,000 MW governed by the grid capacity in the potential states.

Oil and Natural Gas Corporation (ONGC) and Oil India Limited (OIL), the two national companies and a few private and joint venture companies are engaged in exploration and production of crude oil and natural gas in the country. Crude oil production in the country

during the year 2003-04 was 33.378 MMT. Production of natural gas during the same period was about 31.96 billion cubic meters.

Atomic Energy

The Department of Atomic Energy, established on 3 August 1954, has been engaged in the development of nuclear power technology, application of radiation technologies in the field of agriculture, medicine, industry and basic research. It supports 7 institutes of international repute engaged in research in basic sciences, astronomy, astrophysics, cancer research and education, etc. The Department being an integrated organisation comprises 5 research centres, 3 industrial organisations, 4 public sector undertakings, and 3 service organisations.

The Indian nuclear power programme started off in the sixties. The DAE has a 3-stage programme. Stage-I comprises setting up of pressurised heavy water reactors (PHWR) and associated fuel cycle facilities. Stage-II envisages setting up fast breeder reactors (FBR) backed by reprocessing plants and plutonium based fuel fabrication plants. Stage-III is based on thorium-233 cycle. Uranium-233 is obtained by irradiating thorium. NPCIL is responsible for design, construction, and operation of nuclear power reactors. IGCAR is engaged in design and development of liquid sodium cooled FBRs. BHAVINI, a new company, is responsible for implementing Prototype Fast Breeder Reactor (PFBR) in collaboration with IGCAR and NPGIL. BARC is now developing Advanced Heavy Water Reactor for thorium utilisation, which is abundant in India.

Initially an atomic power station was set up in Tarapur (Maharashtra) - commissioned in 1969. The first two PHWRs built at Rawatbhata (Rajasthan) started commercial production in 1972 and 1980. Two 2x220 PHWR was commissioned at Kakrapar in 1982 and 1995. In 1999-2000, 2x220Mwe

PHWR came online each at Kaiga (Karnataka) and Rawatbhata (Rajasthan). Now Nuclear Power Corporation is operating 14 nuclear power reactors, with a total installed capacity of 2720 Mwe. It has gained an experience of over 200 reactor years of nuclear power plant operation. The total generation of nuclear power since the commencement of their commercial operation stands at 1,85,640 million units till Dec 2002.

National Power Grid

The Union government in 1980 approved in principle the establishment of a Centrally owned and operated national power grid. The national grid would eventually comprise strong regional networks with suitable HVDC links between the regions. The inter-regional power transfer capacity today has been raised to 4350 MW from a mere 500 MW in 1992-93. The inter-regional HVDC back to back links Vindhyachal (2X250 MW) connecting Western and Northern regions, Bhadrawati (2X500 MW) connecting Western and Southern Region, Gazuwaka (1X500 MW) connecting Eastern and Southern Region are in operation. These as well as the other AC links between regions form the important components of the National Power Grid. The basic framework

of the Power Grid shall be in place after completion of ongoing East-North Sasaram HVDC inter-connection scheduled for completion by 2002. The power transfer capacity is also planned to be enhanced in a progressive manner up to 14000 MW by 2004-05 and up to 30,000 MW by the year 2012 through establishment of various inter-regional AC and HVDC links along with transmission highways planned for future. The Power Grid Corporation of India Limited established in 1989 has been vested with the responsibility of developing the National Grid.

Rural Electrification: In 1947, only 1500 villages in the country were electrified. Now under the rural electrification programme 5,06,401 (86.2%) villages out of the total 587258 villages have been electrified. Similarly, a total of 1,24,45,010 million pumpsets have been energised up to February, 2000 out of the total estimated potential of energisation of 19.6 million pumpsets thus achieving 63% of energisation target for pumpsets. The Government launched Kutir Jyoti Programme on the occasion of Nehru Centenary Year (1988-89) for extending single point connection to the households of rural poor families below poverty lines. This programme is also being given priority in the rural electrification schemes.

Transportation

Railways

Railways provide the principal mode of transportation for freight and passengers. The first ever train in India was flagged off from Bombay to Thane on April 16, 1853. The distance was just 34 kms. It is now one of the world's largest transportation systems.

The total network route km is 63,221 and the number of employees 1.54 million. The number of trains every day is around 11,000, of which 7000 are passenger trains. It has now grown into a network of 7,031 stations, with a fleet of 7,817 locomotives, 5,321 passenger service vehicles, 4904 other coaching ve-

hicles and 2,28,170 wagons as on 31 March 2004.

Railway Zones

| Zone (16) | Headquarters |
|---------------------|----------------------|
| Southern | Chennai |
| Western | Mumbai (Church Gate) |
| Central | Mumbai CST |
| Northern | New Delhi |
| Eastern | Kolkata |
| South-Eastern | Kolkata |
| North-Eastern | Gorakhpur |
| South-Central | Secunderabad |
| North-East Frontier | Maligaon (Guwahati) |
| North-Central | Allahabad |
| East-Central | Hajipur |
| North-Western | Jaipur |
| East-Coast | Bhubaneswar |
| South-Western | Hubli |
| West-Central | Jabalpur |
| South-East Central | Bilaspur |

Shipping and Ports

India has a 7617 km long coastline. About 95% of India's foreign trade by volume and 70% by value moves through ports.

There are 12 major Ports in India, viz. Kolkata (including Haldia), Paradip, Visakhapatnam, Chennai, Ennore and Tuticorin on the East coast; and Cochin, New Mangalore, Mormugao, Jawaharlal Nehru (JNPT), Mumbai and Kandla on the West coast.

There are 185 minor/intermediate ports under the administrative control of concerned maritime State Government. Out of these, about 43 ports handle cargo.

During 2003-04, minor ports handled about 113.41 MT of cargo traffic which is approximately 25% of the total cargo traffic handled by the Indian ports.

As on 1 April 2005, there were 686 ships registered in India with a Gross tonnage (i.e. freight carrying capacity) of 8.01 million tonnes. India has the largest merchant shipping fleet among the developing countries and ranks 19th amongst the countries with the largest cargo carrying fleet

with 7.07 million GT and the average of the fleet being 17 years. During 2003-04, the overall share of Indian ships in India's overseas trade was about 16.9%. There are 28 shipyards in the country; 7 under Central public sector, 2 under State Governments and 19 under private sector.

Inland Waterways

Three inland waterways have been declared as National Waterways. They are: (1) NW-1: Alahabad-Haldia stretch (1620 km) of the Ganga-Bhagirathi-Hoogly river system; (2) NW-2: Sadiya-Dhubri stretch (891 km) of the Brahmaputra river; and (3) NW-3: Kottapuram-Kollam stretch (168 km) of the West Coast Canal along with Champakara Canal (923 km) and Udyogmandal Canal (14 km).

During the 9th Plan period there was additional capacity creation to the extent of 124.40 MTPA in the 12 major ports resulting in aggregate capacity for these ports reaching 343.95 MTPA by the end of the 9th Plan period.

By the terminal year of the 10th Plan in 2006-07, traffic in major ports is projected to reach 415 million tonnes whereas aggregate capacity in major ports is expected to reach a level of 470.60 MTPA.

Roads

India has a vast road network of about 3.32 million km that includes National Highways, State Highways, major district roads and rural roads. The length of National Highways in the country at the time of Independence (1947) was 21,440 km. Today, the length of National Highways is 65,569 km, the length of State Highways is 1,31,899 km, the length of major district roads is 4,67,763 km and the length of rural roads is 25,50,500 km.

Roads carry about 70% of the freight traffic and about 85% of the passenger traffic in the country. National highways carry about 25% of the entire national traffic in the country. The number of district roads in

registered motor vehicles in India (as per year 2002 data) is 5,88,63,000 that includes 4,14,78,000 two-wheelers, 75,71,000 cars, jeeps and taxis, 6,69,000 buses, 30,45,000 goods vehicles and 61,00,000 other vehicles. Traffic on the roads is growing at the rate of 7 to 10% per annum.

Civil Aviation

The civil aviation sector in India is now undergoing a rapid phase of expansion. Despite the nation's population of more than a billion people, it has just 165 commercial planes. But the country is changing rapidly, emerging as one of the fastest growing markets. Air traffic in India has been growing rapidly, adding around 275,000 passenger seats in 2004, and it is expected to add more than 325,000 in 2005.

Existing Position: There are 449 airports/airstrips in the country. Among these, the AAI owns and manages 92 airports and 28 civil enclaves at defence airfields and provides air traffic services over the entire Indian airspace and adjoining oceanic areas.

In 1996-97, these 120 airports/civil enclaves handled 3.96 lakh aircraft movements involving 243 lakh domestic and 122 lakh international passengers, and 20 lakh metric tonnes of domestic and 4.8 lakh metric tonnes of international cargo. 52% of traffic was handled at the international airports at Mumbai and Delhi. Presently, the various airlines are operating only through 61 airports. The remaining are lying unutilised, at best handling occasional aircraft operations.

Historically, air traffic at Indian airports has broadly followed a particular distribution pattern, except that some airports have changed their inter se positions vis-a-vis volume of traffic.

Airports are presently classified in the following manner: (i) International Airports: These are declared as International Airports and are available for scheduled

international operations by Indian and foreign carriers. Presently, Mumbai, Delhi, Chennai, Kolkata and Thiruvananthapuram are in this category; (ii) Custom Airports: These have customs and immigration facilities for limited international operations by national carriers and for foreign tourist and cargo charter flights. These include Bangalore, Hyderabad, Ahmedabad, Calicut, Goa, Varanasi, Patna, Agra, Jaipur, Amritsar and Tiruchirappalli; (iii) Model Airports: These are domestic airports which have minimum runway length of 7500 feet and adequate terminal capacity to handle Airbus 320 type of aircraft. These can cater to limited international traffic, if required. These include Lucknow, Bhubaneswar, Guwahati, Nagpur, Vadodara, Coimbatore, Imphal and Indore; (iv) Other Domestic Airports: All other airports are covered in this category; (v) Civil Enclaves in Defence Airport: These are 28 civil enclaves in Defence airfields.

Proposed Classification of Airports:

1. To develop the capacity of airports in accordance with the future projections, it is proposed to reclassify the airports as follows: (a) International Hubs: This category will be that of 'International Hubs' which may cover airports currently classified as 'International airports' and those eminently qualified to be upgraded as such. These would at present cover Delhi, Mumbai, Chennai, Kolkata and Thiruvananthapuram. Airports at Bangalore, Hyderabad, Ahmedabad, Amritsar and Guwahati can be added to the list as and when the facilities are upgraded to the desired level. International hubs would be used for dispersal of international traffic to the hinterland. In these airports, the facilities shall be of world class standards, including convenient connections to international and domestic passengers, airport-related infrastructure like hotels, shopping areas, conferencing and entertainment facilities,

aircraft maintenance bases, etc.; (b) Regional Hubs: Government is keen to encourage development of regional airlines based on small aircraft to provide air linkages in the interior areas of the country. Regional hubs will have to act as operational bases for regional airlines and also have all the facilities currently postulated for model airports, including the capability to handle limited international traffic. The identification of

Regional Hubs will be made on the basis of origin-destination surveys, traffic demand and the requirements of the airlines. State Govt. will be closely associated as co-promoters of regional airlines; (c) Other operational airports: These will be developed so as to be cost-effective on the basis of individual needs to meet the requirements of traffic handled by them. Airports serving State Capitals will be given priority.

Defence

The Army

The Army is organised into five operational Commands, viz., Southern, Eastern, Western, Central and Northern Command and one Training Command. The Army consists of a number of arms and services. At the Army Headquarters in New Delhi, the Chief of the Army Staff is assisted by the Vice-Chief of the Army Staff and seven other Principal Staff Officers.

Navy

The Navy is responsible for defence and security of India's maritime interests and assets, both in times of war and peace. The Chief of the Naval Staff at the Naval Headquarters, New Delhi, is assisted by four Principal Staff Officers. The Navy has three commands, i.e., Western, Eastern and Southern, with their headquarters located at Mumbai, Vishakhapatnam and Kochi respectively. At present, it has two major Naval bases at Mumbai and Vishakhapatnam.

Air Force

The Indian Air Force, established more than six decades ago, has indeed come a

long way to become a balanced and potent world class Air Force in the world. There are five operational commands. These are: Western Air Command, South-Western Air Command, Central Air Command, Eastern Air Command and Southern Air Command. In addition, Maintenance Command and Training Command are two functional commands. The Air Headquarters is in New Delhi.

Women in the Armed Forces

While provision has all along existed for women to join the Armed Forces Medical Services, the Armed Forces Dental Services and the Military Nursing Service, Section 12 of the Army Act provided that women would not normally be eligible for enrolment in the Army. Similar provisions also existed in the cases of the Air Force and the Navy. However, in acknowledgement of the changing times, the Government has approved the induction of women into selected non-combatant branches in the three Forces. The entry of women is mainly in the officer cadres and on Short Service Commission basis. Further continuance depends on

the basis of the experience gained. In pursuance of this decision, several women officers have since joined the Service, in the EME, Signals, Engineers, Army Education Corps, Army Ordnance Corps, Army Service Corps and in the Judge Advocate General Department.

Coast Guard

The Coast Guard came into being on 1 February 1977 and was constituted as an independent Armed Force of the Union of India with the enactment of CG Act 1978 on 18 August 1978. The Coast Guard's broad Charter of Duties includes: (a) Safety and protection of offshore installations and artificial islands; (b) Providing protection to fishermen in distress; (c) Protection of maritime environment; (d) Assisting Customs in anti-smuggling operations; (e) Enforcement of MZI Act; and (f) Safety of life and property at sea.

National Cadet Corps (NCC)

The National Cadet Corps (NCC) established on 15 July 1948 has emerged as the single largest structured youth movement in India. It has 12 lakh boys and girls in the Senior and Junior Divisions in the Army, Navy and Air Force Wings. This strength covers 3.8% of the eligible student population in the country. Director General, NCC located at New Delhi controls and oversees various activities of the NCC through 16 NCC Directorates spread across the country.

Military Education & Training: Major Institutions are: Sainik Schools, National Defence Academy (NDA), Khadakwasla, The Indian Military Academy (IMA), Dehradun, The Officers' Training Academy, (OTA) Chennai, Rashtriya Indian Military College, Dehradun, The National Defence College (NDC), Army Cadet College (a wing of IMA), Army School of Physical Training (ASPT), Pune, The College of Combat,

Mhow, College of Military Engineering, Kirkee (Pune), The Military College of Telecommunication Engineering, Mhow, The Armoured Corps Centre and School, Ahmednagar, The School of Artillery, Deolali, The Air Defence Guided Missiles School at Gopalpur-on-sea, The High Altitude Warfare School - Gulmarg and Sonmarg, The Counter Insurgency and General Warfare School, Vairengate, and The College of Materials Management, Jabalpur.

Defence Research

The Defence Research & Development Organisation (DRDO) has embarked on a journey to empower India with the cutting-edge defence technology in pursuit of technological excellence.

The DRDO executes various R&D projects through a network of 51 laboratories spread across India. The department has a technical work force comprising 6,000 scientists, engineers and 35,000 office personnel.

In 2004, MBT Arjun has rolled out making everybody proud. It is the state-of-the-art flagship of Indian armour. It is fortified with laser range finder, Israeli missiles, thermal sighting equipment, etc.

The supersonic missile BRAHMOS is the outcome of a joint venture between India and Russia. It has been flight-tested and inducted into services. The production facilities have also been geared up in both the countries to meet the orders.

The first Technology Demonstrator was flight-tested on January 4, 2001. The second Technology Demonstrator made its maiden flight on June 6, 2002. Till now 33 test flights have taken place. To accelerate the pace of development and flight trials, 5 more prototype vehicles PV1-PV5 are being built. The Light Combat Aircraft (LCA) is planned to be inducted into Air Force after the initial operational clearance in 2005-06.

Agni I, a single stage solid propelled

missile having a range of 800 kms was test-fired in January 2004 and also 2003. The range fills the gap between Prithvi and the Intermediate Range Ballistic Missile. This missile can be fired from both rail or road missile launchers.

Another success story is the Pinaka. It is

an Area Weapon System and has undergone confirmatory user trials successfully in July, 2003. The System has met users' requirements for accuracy and consistency. The PINAKA has the capability of firing in a single salvo 12 rockets in less than 40 seconds with a range of 38 kms.

The First War of Independence

The year 1857 is very significant in the history of India's freedom struggle. It witnessed a revolt, which the British historians have dubbed the Sepoy Mutiny and the Indian historians, the First War of Independence. The 150th anniversary of this event was marked in 2006.

In the summer of 1857 the massed clouds burst and the entire British dominion in India shook to its foundations. Troubles first broke out in Berhampore of Bengal on February 26 in the 19th Bengal Infantry. The first shot was fired on March 29 by Mangal Pandey (Ballia, U.P.) of the 34th Bengal Infantry at Barrackpore of Bengal. Mangal Pandey was hanged at Barrackpore on April 8.

Mutiny started on May 10 at Meerut, followed in Delhi on May 11.

Though the revolt began as a mutiny of Indian soldiers against their British commanders, it soon changed its character and became a fight against British rule as such.

Indian soldiers had broken out in open mutiny against British officers many times previously—in 1806 at Vellore (Madras), in 1842 in Bengal, in 1844 in Sind, then in Bihar and Punjab. None of these had any political overtones. But the so-called Mutiny of 1857 differed radically in this respect. The two elements—military and political coalesced in the revolt of 1857.

The Indian soldiers having massacred the British personnel in Meerut, marched to Delhi

and proclaimed the aged Mughal Emperor Bahadur Shah II as the Emperor of India. Bahadur Shah promptly issued a proclamation urging upon the people of India—Hindus and Muslims alike—"to end the tyranny and the oppression of the infidel and treacherous English."

The British recaptured Delhi from the mutineers on September 20. Bahadur Shah surrendered to Lt. W.S.R. Hodson on September 21 at Humayun's Tomb in Delhi.

The immediate results of the 1857 revolt were :

1. The administration of British India, until then under the control of the Board of Directors of the East India Company, was taken over by the British Government. Queen Victoria was proclaimed the Empress of India and the Governor General was designated the Viceroy and Governor General.

2. The British Indian army was re-organised. The quota of British personnel in the army was considerably enhanced and the artillery divisions were manned entirely by the British. In addition, many purely British regiments were formed.

3. The paramountcy of the British Government was proclaimed, that is to say, all ruling kings and titular princes of India were declared feudatories of the British Crown. This proclamation raised many eyebrows among Indian princes, but there was little they could do in the matter.

Internal Security

Border Management

India has 15106.7 km. of land border running through 92 districts in 17 States and a coastline of 7516.6 km. touching 13 States and Union Territories (UTs). India also has a total of 1197 islands accounting for 2094 km. of additional coastline. In fact, barring MP, Chhattis-garh, Jharkhand, Delhi and Haryana, all other States in the country have one or more international borders or a coastline and can be regarded as frontline States from the point of view of border management.

The length of India's land borders with neighbouring countries are:

| Country | Length of the border |
|-------------|----------------------|
| Bangladesh | 4096.7 km. |
| China | 3488 km. |
| Pakistan | 3323 km. |
| Nepal | 1751 km. |
| Myanmar | 1643 km. |
| Bhutan | 699 km. |
| Afghanistan | 106 km. |

Central Police Forces

There are 7 Central Police Forces under the Union Government, namely Assam Rifles (AR), Border Security Force (BSF), Indo-Tibetan Border Police (ITBP), Central Reserve Police Force (CRPF), Central Industrial Security Force (CISF), Sashashtra Seema Bal (SSB) and National Security Guard (NSG).

Tackling Natural Calamities

The Ministry of Home Affairs is the nodal ministry for tackling natural calamities. MHA remains in touch with the affected State Governments during crises and coordinates emergency relief and response of the Central Gov-

ernment which includes search, rescue and evacuation, air dropping and air lifting, communication, transport, food grains and essential commodities, medicines, etc.

Facility to Freedom Fighters

Freedom fighters' pension has been sanctioned to 168906 persons including their dependants. They are provided various facilities like free railway pass, free medical facilities in all the Central Government hospitals and C.G.H.S. facilities, telephone connection without installation charges and payment of half the rental, General Pool Government accommodation in Delhi, 2% dealership/distributorship of petroleum products allotted through Dealer Selection Boards, etc.

Naxal and Maoist Activities

The Government has adopted a multi-pronged strategy to combat the problem of naxalism which inter alia includes peace talks with naxal outfits, accelerated economic development, increased employment opportunities, removal of socio-cultural alienation of the people, and effective anti-naxalite police actions. The incidents of naxalite violence were 1335 during 2004 (as on October 31, 2004) in the country and the number of deaths during 2004 (as on October 31, 2004) 468.

Issue of Passport/Visa

Fourteen types of visas are issued to foreign nationals for different purposes. The number of registered foreigners living in India (excluding Pakistanis) as on 31.12.20 was 3,34,574.

Space Technology

The ISRO space programme has come a long way from a modest beginning with the Nike Apache rocket launch with sodium vapour payload on Nov. 21, 1963. The launch vehicle development programme later shifted from Thumba to the Sriharikota launching station in 1969. The ISRO's maiden venture in developing satellite launch vehicle was itself a failure with the SLV-3 failing due to malfunctioning of first stage control system in August 1979. Undeterred by it, the developmental flight of SLV-3 attempted in 1983 brought happy tidings for the ISRO as the satellite sent home more than 2,500 pictures. While the Augmented Satellite Launch Vehicle (ASLV) launched in 1987 had problems in thrust power due to malfunctioning in first stage motor, its successor sent in July 1988 was a miserable failure as it could last only about 150 seconds before it met with its watery grave in the Bay of Bengal. In May 1992 ISRO launched the ASLV-3 which hoisted the Stretched Rohini Satellite (SROSS). Its successor launched in May 1994 was a success.

Major Achievements

1962: Indian National Committee for Space Research (INCOSPAR): formed by the Department of Atomic Energy, and work on establishing Thumba Equatorial Rocket Launching Station (TERLS) near Trivandrum began.

1963: First sounding rocket launched from TERLS on November 21, 1963

1965: Space Science & Technology Centre (SSTC) established in Thumba

1967: Satellite Telecommunication Earth Station set up at Ahmedabad.

1972: Space Commission and Department of Space setup.

1975: First Indian Satellite, Aryabhata, launched (April 19, 1975)

1979: Bhaskara-1, an experimental satellite launched. First experimental launch of SLV-3 with Rohini satellite on board failed.

1980: Second experimental launch of SLV-3 Rohini satellite successfully placed in orbit.

1981: APPLE, an experimental geostationary communication satellite successfully launched on June 19.

1981: Bhaskara-II launched on November 20.

1982: INSAT-1A launched (April); deactivated in September.

1983: Second launch of SLV-3.RS-D2 placed in orbit. INSAT-1B launched.

1984: Indo-Soviet manned space mission (April). Rakesh Sharma became the first Indian to reach space

1987: ASLV with SROSS-1 satellite on board launched.

1988: First Indian remote sensing satellite, IRS-1A launched. INSAT-1C launched (July). Abandoned in November.

1990: INSAT-1D launched successfully.

1991: Launch of second operational Remote Sensing satellite, IRS-1D (August)

1992: Third developmental launch of ASLV with SROCC-C on board (May). Satellite placed in orbit. First indigenously built satellite INSAT-2A launched successfully.

1993: INSAT-2B launched in July successfully.

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Freedom fighters' pension has been sanctioned to 168906 persons including their dependants. They are provided various facilities like free railway pass, free medical facilities in all the Central Government hospitals and C.G.H.S. facilities, telephone connection without installation charges and payment of half the rental, General Pool Government accommodation in Delhi, 2% dealership/distributorship of petroleum products allotted through Dealer Selection Boards, etc.

Naxal and Maoist Activities

The Government has adopted a multi-pronged strategy to combat the problem of naxalism which inter alia includes peace talks with naxal outfits, accelerated economic development, increased employment opportunities, removal of socio-cultural alienation of the people, and effective anti-naxalite police actions. The incidents of naxalite violence were 1335 during 2004 (as on October 31, 2004) in the country and the number of deaths during 2004 (as on October 31, 2004) 468.

Issue of Passport/Visa

Fourteen types of visas are issued to foreign nationals for different purposes. The number of registered foreigners living in India (excluding Pakistanis) as on 31.12.2003 was 3,34,574.

Space Technology

The ISRO space programme has come a long way from a modest beginning with the Nike Apache rocket launch with sodium vapour payload on Nov. 21, 1963. The launch vehicle development programme later shifted from Thumba to the Sriharikota launching station in 1969. The ISRO's maiden venture in developing satellite launch vehicle was itself a failure with the SLV-3 failing due to malfunctioning of first stage control system in August 1979. Undeterred by it, the developmental flight of SLV-3 attempted in 1983 brought happy tidings for the ISRO as the satellite sent home more than 2,500 pictures. While the Augmented Satellite Launch Vehicle (ASLV) launched in 1987 had problems in thrust power due to malfunctioning in first stage motor, its successor sent in July 1988 was a miserable failure as it could last only about 150 seconds before it met with its watery grave in the Bay of Bengal. In May 1992 ISRO launched the ASLV-3 which hoisted the Stretched Rohini Satellite (SROSS). Its successor launched in May 1994 was a success.

Major Achievements

1962: Indian National Committee for Space Research (INCOSPAR): formed by the Department of Atomic Energy, and work on establishing Thumba Equatorial Rocket Launching Station (TERLS) near Trivandrum began.

1963: First sounding rocket launched from TERLS on November 21, 1963

1965: Space Science & Technology Centre (SSTC) established in Thumba

1967: Satellite Telecommunication Earth Station set up at Ahmedabad.

1972: Space Commission and Department of Space setup.

1975: First Indian Satellite, Aryabhata, launched (April 19, 1975)

1979: Bhaskara-1, an experimental satellite launched. First experimental launch of SLV-3 with Rohini satellite on board failed.

1980: Second experimental launch of SLV-3 Rohini satellite successfully placed in orbit.

1981: APPLE, an experimental geostationary communication satellite successfully launched on June 19.

1981: Bhaskara-II launched on November 20.

1982: INSAT-1A launched (April); deactivated in September.

1983: Second launch of SLV-3.RS-D2 placed in orbit. INSAT-1B launched.

1984: Indo-Soviet manned space mission (April). Rakesh Sharma became the first Indian to reach space

1987: ASLV with SROSS-1 satellite on board launched.

1988: First Indian remote sensing satellite, IRS-1A launched. INSAT-1C launched (July). Abandoned in November.

1990: INSAT-1D launched successfully.

1991: Launch of second operational Remote Sensing satellite. IRS-1D (August)

1992: Third developmental launch ASLV with SROCC-C on board (May). Satellite placed in orbit. First indigenous satellite INSAT-2A launched

1993: INSAT-2B launched

fully. First developmental launch of PSLV with IRS-1E on board fails.

1994: Fourth developmental launch of ASLV successful (May). Second developmental launch of Polar Satellite Launch Vehicle (PSLV) with IRS-P2 successful (October).

1995: INSAT-2C launched in December. Third operational IRS (IRS) launched.

1996: Third developmental launch of PSLV with IRS-P3 successful (March).

1997: INSAT-2D launched in June becomes inoperational in October. Arabsat 1C, since renamed INSAT-2DT, acquired in November. First operational launch of PSLV with IRS-1D successful (September).

1998: INSAT system capacity augmented with the readiness of INSAT-2DT acquired from Arabsat (January).

1999: INSAT-2E the last satellite in the multi-purpose INSAT-2 series, launched by Ariane from Kourou French Guyana (April 3, 1999). IRS-P4 (OCEANSAT) launched by Polar Satellite launch Vehicle (PSLV-C2) along with Korean KITSAT-3 and German DLR-TUBSAT from Sriharikota (26 May 1999).

2000: INSAT-3B was launched on 22 March 2000.

2001: Geosynchronous Satellite Launch Vehicle-D1 (GSLV-D1), the first developmental launch of GSLV with GSAT-1 on board partially successful.

2002: INSAT-3C launched successfully by Ariane space (January), PSLV-C4 launches KALPANA-1 (September)

2003: GSLV-D2, the second developmental launch of GSLV with GST-2 successful (May).

2004: First operational flight of GSLV (F1) successfully launches EDUSAT (September).

2005: Launch of CARTOSAT and HAMSAT by PSLV-C6 from the second launch pad (Universal Launch Pad) (May)

2006: INSAT 4A launched. Planned launch of CARTOSAT-2 SRE and LAPAN-TUBSAT

2006: INSAT 4C launch was unsuccessful. The ISRO decade plan include the following launch schedule:

2005-2006: One PSLV launch (PSLV-C7). Launch of CARTOSAT -2, SRE-1, INSAT-4A and INSAT-4B.

2006-2007: One PSLV launch, (PSLV-C8), and three GSLV launches (GSLV-D3, F2, F3). Launch of OCEANSAT-2, GSAT-4, INSAT-4C and INSAT-4D.

2007-2008: Three PSLV launches (PSLV-C9, C10, C11), two GSLV launches (GSLV-F4, F5) and one GSLV-III launch (GSLV-III-D1). Launch of CHANDRAYAAN, ASTROSAT, RISAT-1, GSAT(MKIII), INSAT-3D and INSAT-4E.

Literacy and Education

In 1951 India's literacy was only 18.3 per cent. Today the rate stands at 64.8 per cent. Quite a big leap for independent India. However, India continues to lag behind several other developing countries in the region.

China's adult literacy rate was 78.3 in 1990 and 85.8 in 2001, when India reported 49.3 and 58.0 respectively. Sri Lanka posted youth literacy rate of 95.1 (1990) and 96.9 (2001) while India's rates were 64.3 and 73.3 respectively.

Census data indicate that the number of literates in India grew by 52 percent in 1981-91 and 59 percent in 1991-2001. The absolute number of illiterates increased during 1981-91 but substantially declined during 1991-2001.

The National Policy on Education (1986) provides a broad policy framework for eradication of literacy and sets a goal of expenditure on education at 6 percent of the GDP. As against the goal of 6 percent, the total expenditure on education by both central and state governments was only 3 percent of GDP in 2002-03.

Literacy rates in India (1951-2001)

| Census Year | Persons | Male | Female | Male-Female gap in literacy rate |
|-------------|---------|-------|--------|----------------------------------|
| 1951 | 18.33 | 27.16 | 8.66 | 16.30 |
| 1961 | 28.30 | 40.40 | 15.35 | 25.05 |
| 1971 | 34.45 | 45.96 | 21.97 | 23.98 |
| 1981 | 43.57 | 56.38 | 29.76 | 26.62 |
| 1991 | 52.21 | 64.13 | 39.29 | 24.64 |
| 2001 | 64.84 | 75.85 | 54.16 | 21.69 |

Source : Census of India

Elementary education

In order to fulfil the goal of universal elementary education, Constitutional (86 Amendment) Act, 2002 has been passed by the Parliament.

A comprehensive programme called Sarva Shiksha Abhiyan (SSA) was launched in November 2000 in partnership with the States. The programme aims to improve the performance of the school system through a community-owned approach and to impart quality elementary education to all children in the age group of 6-14 by 2010. It seeks to bridge gender and social disparities at the elementary level. It subsumes all existing programmes, including externally aided programmes, within its overall framework, with the district as the unit of implementa-

tion. National Programme for Education of Girls at Elementary Level (NPEGEL) has been launched for education of girls at elementary level under SSA.

There were 6.51 lakh primary schools and 2.45 lakh upper primary schools in 2002-03. During 2001-02 and 2002-03 the growth rate of enrolment for girls at the elementary level was higher than that of boys. Participation of girls at all levels of school education has improved appreciably over the years, but vast disparities amongst the States in Gross Enrolment Ratio (GER) at primary/upper primary level persist with States in the North-East performing better than others.

Of the estimated population of 205 million in the age group of 6-14 years on March 1, 2002, nearly 82.5 percent was enrolled in schools, compared with 82.4 percent in 2001-02. The student retention at the primary school stage was about 59 percent (1992-1997). At the primary level, the drop-out rate decreased from 39 percent in 2001-2002 to 34.9 in 2002-2003. At the upper primary level, the dropout rate decreased from 54.6 percent in 2000-2001 to 52.8 over the same period. The drop out rate of girl students was 33.7 percent and 53.5 percent at the primary and upper primary levels respectively, in 2002-2003.

The Pupil Teacher Ratio (PTR) at the primary level has remained more or less constant at 43:1 during 2001-02. At the upper primary level, it was 34:1.

Adult Education

The National Literacy Mission was launched on May 5, 1988 as a Technology Mission to impart functional literacy to non-literates in the country in the age group of 15-35 years in a time-bound manner. The National Education Policy-1986 as modified in 1992, also has recognized the National Literacy Mission as one of the three instru-

ments to eradicate illiteracy from the country, the other two being Universalisation of Elementary Education and Non-formal Education.

The Mission objective is to attain a sustainable threshold literacy rate of 75 percent by 2007. The Total Literacy Campaign (TLC) has been the principal strategy of National Literacy Mission for eradication of illiteracy in the target age-group.

Secondary Education

The Secondary Education sector prepares students in the age group of 14-18 years for entry into higher education as well as for the world of work. The number of secondary and senior secondary schools during 2002-03 is 1,37,207 with an enrolment of students of 33.2 million.

University & Higher Education

There has been an impressive growth in the area of university and higher education. Accreditation of all Universities and Colleges has been made mandatory. Students' enrolment in higher education rose from 7.26 million in 1997-98 to 9.51 million in 2003-04. Enrolment of women students rose to

3.81 million with women constituting 40 percent of the total in 2003-04. There has been a significant increase in the students' enrolment under Open and Distance Education System.

At present, there are 306 university-level institutions in India (including 18 Central Universities, 186 State Universities, five Institutions established under State Legislature Act, 82 Deemed Universities and 13 Institutes of national importance). Of these, 38 Institutions provide education in agriculture (including forestry, dairy, fisheries and veterinary science), 21 in medicine (including Ayurveda), 44 in engineering and technology, and four in Information Technology, four in Legal Studies. The number of Open Universities is nine and that of Women Universities is five.

Technical and Professional Education

There are 1,349 approved engineering colleges at the degree level. Apart from this, 1,030 institutes offer a Master of Computer Application (MCA) programme. There are 990 approved Management Institutes imparting MBA courses.

Indo-Anglian Writing

Though foreign in its origin, English has been adopted in India as a language of education and literary expression besides being an important medium of communication on a vast scale. Its history in India commences with Ram Mohan Roy's (1774-1833) campaign for introduction of scientific education in India through the English medium. He could use the English language effectively though

he learnt it only after he was 16 years of age. But when Vivekananda spoke and wrote in English, Americans described him as a 'perfect master of the English language'.

Among those whose writings in prose are considered as literature the name of Jawaharlal Nehru (1889-1964) stands out. He is particularly remembered for his *Glimpses of World History*, *Discovery of India* and *An*

Autobiography (1936). Gandhi is reported to have cultivated English carefully. The language became a sharp and strong instrument in his hands. His precision, economy and clarity in the use of English is unequalled. Nirad Choudhuri (b. 1897-1999) is an internationally accepted writer of English. His *Autobiography of an Unknown Indian* (1951) is particularly well known.

We have the extraordinary girl Toru Dutt (1855-76) who died at 21 leaving some fine poems; and then we have Sarojini Naidu (1879-1949) whose romanticism charmed readers in India and Europe. (*Golden Thresh-old, The Broken Wing*). Aurobindo (1872-1950) who had his education in Cambridge mastered not only English, Greek and Latin but also French and Italian. (*Savitri, Life Divine*—2 vols). Tagore's *Gitanjali* won the Nobel Prize in 1913. The lyrical quality of *Gitanjali* is universally accepted.

During the contemporary period, we have quite a few Indians, who write poetry in English: Dom Moraes (*A Beginning*, which won 19-year-old undergraduate of Oxford University the prestigious Hawthornden Prize), Nissim Ezekiel (*The Unfurnished Man*), P. Lal, A.K. Ramanujan, Kamala Das, Arun Kolatkar, R. Parthasarathy, etc. Dom Moraes also produced excellent autobiographical works *Son of My Father and Never at Home*. Keki Daruwalla and Shiv K. Kumar are other noted names.

In the field of Indian English novel, the three senior writers who began to write in the early thirties are Mulkraj Anand, R.K. Narayan and Raja Rao. Anand's major novels *Coolie* (1933), *Untouchable* (1935), *The Woman and the Cow* (1960) reveal his concern for the underprivileged in India.

R.K. Narayan has projected 'Malgudi' as the locale for most of his stories. *Sivami and His Friends* (1935), *Bachelor of Arts* (1937), *The Financial Expert* (1952), *The Guide* (1959) and *Waiting for the Mahatma* (1955) are his

popular novels. Raja Rao's *Kanthapura* (1938), *The Serpent and the Rope* (1960) and *The Cat and Shakespeare* (1965) are significant achievements.

Other novelists of repute are G.V. Desani (*All About H. Hatterr*, 1948), M. Ananthanarayanan, Bhabani Bhattacharya, (who died in the U.S. in 1988), Manohar Malgonkar, Arun Joshi, Kamala Markandaya, Anita Desai (*Clear Light of Day*, 1980), Bharati Mukherjee, Khushwant Singh, Nayantara Sahgal, O.V. Vijayan and Salman Rushdie. As regards drama and the essay the contribution is not substantial. Among the critics and historians of literature are K.R. Sreenivasa Iyengar, C.D. Narasimhaiah and M.K. Naik.

Other big names in Indo-Anglian writing include Ruskin Bond (*The Room on the Roof*) Vikram Seth (*A Suitable Boy*), Allan Sealy (*The Trotter-Nama*), Shashi Tharoor (*Show Business, The Great Indian Novel*), Amitav Ghosh (*Circle of Reason, Shadow Lines*), Upamanyu Chatterjee (*English August*), Vikram Chandra (*Red Earth and Pouring Rain*), Shobha De, and Ginu Kamani.

Indian writing has thrown up names of the calibre of Manjula Padmanabhan (*The Harvest*), Booker-winner Arundhati Roy (*The God of Small Things*), Manju Kapur (*Difficult Daughters*), Raj Kamal Jha (*The Blue Bed Spread*), Anurag Mathur (*The Inscrutable Americans*), Manil Suri (*The Death of Vishnu*), Pulitzer Prize winning Jhumpa Lahiri (*The Interpreter of Maladies, The Namesake*), Kiran Desai (*Hullabaloo In A Guava Orchard, Inheritance of Loss*), Ruchira Mukherjee (*Toad In My Garden*), Shashi Tharoor (*Riot: A Novel*), David Davidar (*A House of Blue Mangoes*), Kavita Daswani (*Everything Happens For A Reason*) and Rohinton Mistry (*Family Matters*).

Recent works include Gautam Malkani's *Londonstani*, Upamanyu Chatterjee's *Weight Loss*, Manju Kapoor's *Home* and Amitav Ghosh's *The Hungry Tide*.

Health Scenario - Importance of Cardiac Care

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Hearth diseases contribute a major share in the health problem of India. The faster pace of industrialization and also the inroad of the Western culture have added to the menace of health care issue. These factors increase the stress load and also the risk of development of major factors which may contribute to the occurrence of heart diseases. Maladjustments and social, psychological and financial strain that occur when we try to artificially put the foreign customs and culture into our well reputed ones lead to alteration in the body's natural physiologic mechanism that can lead to a variety of major illnesses including heart disease. One such classical example is the shift from the sacred joint family set up to the present shattered nuclear family concept (reality).

Heart diseases do not constitute a homogenous entity; different types of heart diseases exist. In the chronological sequence the common heart diseases can be grouped as (a) congenital heart disease (present at birth; occurs due to derangement in the development of embryo in foetal life) (b) rheumatic heart disease affecting the cardiac valves (secondary to the disease "rheumatic fever" which occurs during school age) (c) hypertensive heart disease (persistent increase in the blood pressure - hypertension) (d) coronary artery heart disease (eg: heart attack and angina which results from the narrowing of the coronary arteries which supply oxygenated blood to the heart) and (e) miscellaneous group eg: cardiomyopathies (disease of heart muscle), pericardial diseases (affecting pericardium which is the protective covering of the heart), degenerative dis-

eases (due to the ageing process) etc.

Cardiovascular diseases account for a large population of all deaths and disability all over the world. Global Burden of Disease (GBD) Study (2000) reported that in 1990 there were 5.2 million deaths from cardiovascular diseases in economically developed countries and 9.1 million deaths from the same cause in developing countries. In developing countries this occurred more in relatively younger age group - more than half of the deaths in developing countries occurred in those under 70 years. In 1990 cardiovascular diseases caused 2.3 million deaths in India which accounted for 25% of the total deaths. Of this half was due to coronary artery heart disease. By 2020 this number is likely to get doubled.

As per the data of the GBD study the leading causes of death in developing countries like India are ischemic heart disease (9.1%), cerebrovascular disease (8%), lower respiratory infection (7.7%), AIDS (6.9%) and lung diseases (8.7%). Apart from the death rate, disability plays a central role in the health status of a population. The leading causes of disability are substantially different from those of death. Lower respiratory infections rank as the leading cause of death in developing countries. However heart diseases especially ischemic heart disease contribute significantly to disability in countries like India.

Burden of coronary heart disease in India

As mentioned earlier, in 1990 1.2 million deaths in India were due to coronary heart disease which has increased to about 1.59 million

in 2000 and this is likely to double by 2020 (compared to a 15% rise in developed countries). This would extrapolate to about 32 million patients with coronary heart disease in India in 2000, compared to 2.7 million in UK.

Epidemiological studies have revealed that the prevalence of coronary heart disease (CHD) is on the rise in India. There is a difference between rural and urban population. The prevalence has increased in urban areas from about 6% in 1970 to about 10% in 2000; while in rural areas it has increased from 2% to 4.5%. Whether there is an actual increase or the hike is due to improvement in the detection of cases (as awareness and health care system have improved) is debatable. In terms of absolute numbers there is a very steep increase in CHD cases in both rural and urban areas. In urban population the number of patients with CHD has increased from 4.5 million in 1970 to about 14 million in 2000 whereas in rural population it has increased from 4 million in 1970 to about 16 million in 2000. As the epidemiological studies exclude many patients with silent CHD, the actual number is likely to be still higher.

Burden on Health Care System

As the prevalence of CHD is increasing the number of hospital admissions is also on the rise. This is increasing the burden on health care system. A study from Kerala has shown that there has been a more than twentyfold increase in admissions for heart attack over a period of 25 years.

Economic burden

As per the projected epidemiological data, out of the 32 million patients with CHD in India roughly 8 million would be under some forms of treatment. The average expenditure for treatment comes to about Rs.10 per day i.e. Rs.3500 per year. Hence the total financial burden for medical treatment alone comes to about Rs.3000 crores per year. This is in addition to the expenses involved for hospital visits,

laboratory tests, etc. The expenses related to more sophisticated tests and treatment (like coronary angiogram, angioplasty, bypass surgery) have also to be added.

Social burden

Coronary heart disease manifests in Indians at least 10 years earlier than the western population. Premature coronary heart disease causes significant social burden in terms of loss of support for children, women and the elderly. Exact loss to the family in terms of financial and social aspect of such an event is difficult to calculate.

Prevalence of CHD among South Asians (Asian Indians)

The terms "South Asians or Asian Indians" include persons that originated in the Indian subcontinent (India, Pakistan, Bangladesh, Nepal, Bhutan & Sri Lanka) who form the immigrant populations that reside in different parts of the world. Obviously the majority of these will be the Indians and hence the term Asian Indians. It has been observed that Asian Indians throughout the world exhibit the highest prevalence of coronary heart disease and coronary risk factors. Asian Indians are known to have a higher occurrence of a constellation of coronary risk factors (central obesity, diabetes mellitus or pre-diabetes, high BP, high triglyceride (a type of bad cholesterol) levels and low level of the good cholesterol (HDL) – collectively termed as metabolic syndrome.

Compared to the other Asian population, Indians have a very high prevalence of CHD. The prevalence is low for Japanese and is lowest for Chinese population. CHD rates among Indians are six times higher than among Chinese. The higher prevalence rate of cardiovascular disease is partly attributable to the influence of affluence. The change in the culture to that of western and the changes in life style lead to a greater degree and duration of exposure to risk fac-

tors. Differences have been observed in the exercise levels and physical activity patterns of Indians. A higher prevalence of sedentary life style and obesity has been observed in the urban compared to the rural communities. Genetic defects also may be contributing to the higher occurrence of CHD among the Indians.

Prevention

Coronary Artery Heart Disease (Ischemic Heart Disease)

Just like any other organ, heart requires oxygen for generating energy to perform its pumping function. Two major blood vessels, coronary arteries, arising from the origin of aorta supplies oxygenated blood to the heart muscle. As age advances, progressive narrowing of the coronary arteries occurs due to deposition of cholesterol and other materials in their walls. Normally this process, called atherosclerosis, which starts in childhood itself is a gradually progressive phenomenon. However until the blood vessel is narrowed by more than 50% of its diameter, the process will not interfere with the blood flow and hence the disease will not manifest. Certain factors (risk factors) enhance the process of coronary atherosclerosis; the influence is very strong for certain factors which are labelled as major risk factors. Diabetes mellitus (elevated blood sugar), hypertension (high blood pressure), high cholesterol and smoking are considered to be the major risk factors. The most important aspect is the fact that all these factors are modifiable to a great extent and hence the need for stress on the prevention of the disease.

Coronary artery heart disease manifests in different ways – asymptomatic from one end to the catastrophic sudden death at the other end. But the common manifestations are angina, myocardial infarction (heart attack) and heart failure. Partial narrowing (but more than 50% of the diameter) results in angina and abrupt total occlusion leads to myocardial infarction. Damage to the heart muscle due to

defective blood supply causes dilatation of the heart and impairment of its pumping function. This status of the heart is called heart failure.

When the coronaries are narrowed by 50-75% of its diameter, patient starts experiencing the symptoms of angina on exercise; when the narrowing of the vessel exceeds 75% the symptoms appear at rest also. Angina is a symptom complex which includes (a) severe chest pain (located at the central part of chest in front) of a peculiar nature (tightness, feeling of compression, bursting) (b) radiation of the pain to other parts of body like inner aspect of arms (left more often than right), throat, lower jaws, back and upper part of abdomen (c) breathing difficulty (d) sweating, vomiting etc. The symptom is brief lasting about 10-30 minutes.

Sudden total occlusion of the coronary arteries with a fresh blood clot results in a more serious disorder called acute myocardial infarction (heart attack). In this situation the heart muscles are damaged due to the total lack of oxygen supply to the region affected. Symptoms of heart attack are similar to those of angina but more severe and prolonged. Heart attack carries great significance in view of the high fatality and morbidity. About 5-10% of patients suffering from heart attack die before they reach the hospital and another 5-10% die during the initial few days of hospital stay. In addition, heart attack can lead to another major complication called heart failure which interferes with the normal activities of the patient. Hence the importance of prevention of the disease and critical care of such patients.

The progress of atherosclerosis can be prevented or retarded to a great extent and it is even possible to reverse the process. Life style modification and interventions to control the risk factors are the most important. As the process of atherosclerosis starts in childhood itself, the life style modification protocol should start in the younger age. Regular exercise, diet regulation and mental relaxation are the important aspects in life style modification.

Regular exercise should be encouraged from childhood itself. Now what we see is people starting exercise after they have already developed the manifestation of the disease (by this time the disease process has advanced fairly well). Walking, cycling, swimming or any dynamic games for about 45 minutes every morning are all very good activities that can maintain adequate body mass and also prevent the development of diabetes mellitus, hypertension, hypercholesterolemia etc. Exercises which yield mental relaxation like yoga, meditation etc are also very useful.

Diet restriction aimed at prevention of atherosclerosis also should be planned from early years of life itself. Quantity and quality of food are equally important to maintain ideal body weight and to reduce blood sugar and cholesterol. High fiber diet with lot of vegetables, pulses and fruits are ideal. The use of oil has to be restricted by avoiding oily and fried food items. Meat (especially red meat e.g.: beef, mutton etc) and milk and milk products also have to be avoided or restricted.

Prevention and/or modification of risk factors is of extreme importance in prevention of coronary artery disease. Quitting smoking can prevent not only heart disease but also other serious diseases like lung cancer. Diabetes mellitus, hypertension, hypercholesterolemia etc. can be controlled by regular exercise, diet regulation and proper medication.

Congenital Heart Disease

Eight out of 1000 live newborns have congenital heart disease. Though majority are simple problems, there is a sizable number which contribute to disability and death. Advances in the field of medical technology and care are laudable but it is adding to a tremendous financial and psychological burden to the family.

Exact reasons for the deranged development of foetus leading to occurrence of congenital heart disease are not identifiable in more than

95% of cases; hence prevention of this disease entity is also difficult. Nutritional deficiencies, inadvertent use of drugs, exposure to X rays and infections during early pregnancy are the identifiable factors which can be easily taken care of by appropriate caution, care and prevention strategies. However in majority of cases the exact cause is not identifiable and hence prevention of CHD is not an easy task. Familial background and propensity for existence of CHD in certain types of disease entities (e.g: Mongolism) contribute to occurrence of CHD. This can be tackled to a great extent by proper parental counseling. Recent advances in detection of CHD during foetal life itself by newer diagnostic modalities (eg: foetal echocardiography) have made the outcome brighter.

Rheumatic Heart Disease

Throat infection by specific bacteria (streptococcus) in school children leads to development of a disease entity called acute rheumatic fever. During an epidemic of streptococcal throat infection about 3% of affected children may develop acute rheumatic fever within 2 weeks of the infection. As an immunologic sequel to the infection, rheumatic fever manifests as fever, pain and swelling of multiple major joints (shoulders, elbows, wrist, hips, knees, ankles), involuntary movements (called chorea), red patches over skin and small nodules underneath the skin. About half of the affected children will have involvement of heart in the form of inflammation (carditis). As a consequence of the carditis these children can develop abnormality of the heart valves in the form of narrowing (eg: mitral stenosis - narrowing of the valve between the two left heart chambers, left atrium & left ventricle) or inappropriate closure of the valves leading to regurgitation of blood from one chamber to another (eg: mitral regurgitation). Many times these abnormalities are mild; however severe forms of valve disease can produce troublesome symptoms (breathing difficulty, palpitation, swelling of feet

etc) and disability. Advances in the field of surgery and non surgical techniques have resulted in a very bright future for these patients.

More important than the fact that effective treatment is available for those with established rheumatic valvular heart disease is the reality that the disease entity is preventable. As the disease is secondary to a simple bacterial infection, prevention and prompt treatment of such infection can prevent an episode of rheumatic fever. Good environmental conditions, prevention of overcrowding, healthy hygienic care of children etc. can prevent the infection to a great extent. Even

if throat infection develops, if it can be taken care of immediately with simple antibiotic therapy, occurrence of rheumatic fever can be prevented. Once rheumatic fever has occurred, recurrences have to be prevented by regular periodic administration of antibiotics like penicillin (as such children are prone to recurrence of rheumatic fever). Vaccines to prevent development of the entity are also being evaluated. The fact that the incidence of rheumatic fever and rheumatic heart disease have come down drastically in Central Kerala is a proof for the concept that rheumatic fever is preventable.

The Media

India has a very active print and electronic media. The total number of newspapers and periodicals was 55,780 as on 31 March 2003.

Radio Broadcasting

Radio broadcasting began in India in the early 1920s. The first programme was broadcast in 1923 by the Radio Club of Bombay. This was followed by the setting up of a Broadcasting Service in 1927 on an experimental basis in Bombay and Calcutta. The government took over the transmitters and began operating them under the name Indian Broadcasting Service. It was changed to All India Radio in 1936.

All India Radio today has a network of 213 broadcasting centres covering 91.37% of the area and almost reaching the entire population of 100 crore. AIR broadcasts in 24 languages and

146 dialects. It has 149 medium wave frequency transmitters, 55 high Frequency Modulation (FM) transmitters.

Television

Television transmission began in India from a makeshift studio in the Akashvani Bhawan in New Delhi on 15th September 1959. A 500 watt transmitter carried the signal within a radius of 25 km. around Delhi. However, a regular service with a news bulletin became a reality only in 1965.

After seven years, the second television centre commenced service in Bombay. By 1975 TV service was available in Kolkata, Chennai, Srinagar, Amritsar and Lucknow. Colour transmission was introduced during the Asian Games held in New Delhi in 1982.

Top Dailies in India

| Rank | Publication | Language | Circulation |
|------|-------------------|-----------|-------------|
| 1. | Dainik Jagran | Hindi | 23,80,145 |
| 2. | Dainik Bhaskar | Hindi | 19,42,525 |
| 3. | Malayala Manorama | Malayalam | 13,95,191 |

| | | | |
|-----|----------------------|-----------|-----------|
| 4. | Ananda Bazar Patrika | Bengali | 12,38,965 |
| 5. | Hindustan Times | English | 12,35,319 |
| 6. | The Hindu | English | 11,81,500 |
| 7. | Hindustan | Hindi | 10,10,606 |
| 8. | Eenadu | Telugu | 10,50,659 |
| 9. | Mathrubhumi | Malayalam | 10,40,183 |
| 10. | Rajasthan Patrika | Hindi | 9,91,797 |

Weeklies

| | | | |
|----|---------------------------|-----------|----------|
| 1. | Malayala Manorama | Malayalam | 7,98,194 |
| 2. | Mangalam | Malayalam | 4,71,938 |
| 3. | Ananda Vikatan | Tamil | 4,38,742 |
| 4. | Balarama | Malayalam | 2,95,527 |
| 5. | Mathrubhumi Thozhilvartha | Malayalam | 2,63,387 |

Fortnightlies & Monthlies

| | | | |
|----|-------------|-----------|----------|
| 1. | Saras Salil | Hindi | 9,19,660 |
| 2. | Vanitha | Malayalam | 5,44,575 |
| 3. | Grih Shobha | Hindi | 3,61,798 |
| 4. | Meri Saheli | Hindi | 3,79,706 |
| 5. | Grehlakshmi | Hindi | 2,87,932 |

Annuals

| | | | |
|----|----------------------------|---------|-----------|
| 1. | Kalnimay | Marathi | 52,02,635 |
| 2. | Kalnimay | Hindi | 6,24,839 |
| 3. | Mallige Panchanga Darshini | Kannada | 2,82,794 |
| 4. | Manorama Yearbook | English | 2,07,594 |
| 5. | Sharadia Bartaman | Bengali | 1,61,787 |

Audit Bureau of Circulations, July-Dec.2005.

Music and Dance

Music is one of the oldest and finest forms of human expression. Music can be divided into Western classical, Hindustani classical, Carnatic classical, Folk, Jazz, Pop, Fusion, etc. The main schools of classical music, Hindustani and the Carnatic, continue to survive through oral tradition being passed on by teachers to disciples. This has led to the existence of family traditions called gharanas and sampradayas.

A new form of Hindustani music known as Khayal emerged during the 13th & 14th cen-

turies. This style gave an entirely new dimension to Hindustani classical music tradition. Amir Khusro is considered the proponent of this style. Thyagaraja, Muthuswami Deekshithar and Shyama Shastri are popularly known as the trinity of Carnatic music.

The pivotal concept of Indian music (Carnatic and Hindustani) is Raga (melody). Ragas are made of different combinations of sapta (seven) swaras: Sa Sadjam; Ri Rishabam; Ga Gaandhaaram; Ma Madhyamam; Pa Panchamam; Dha Dhaivadam; Ni Nishadam.

In Western classical, piano one octave consists of twelve notes whereas in Indian music the same octave contains 22 (srutis) notes. The twenty two srutis are called Siddha, Prabhavati, Kantha, Suprabha, Shikha, Diptimati, Ugra, Hladi, Nirvini, Dira, Sarphara, Kshanti, Hridayonmulini, Visarini, Prasuna, Vibhuti, Malini, Chapala, Vala, Sarvaratna, Sitantaj and Vikalini.

Swara is generally defined as a note whereas sruti constitutes the macrotonal intervals between two swaras. The nuances of these can be best understood in prayoga (practice) rather than theory.

Taal is defined as rhythm. But in vocal music or instrumental music taal plays a creative and organic part in bringing out the essence and elevating the musical expressions to new dimensions. The major taalas are Aadi Taala, a cycle of eight maathras (beats), Chautal or Eaka Taal consisting of twelve maathras mostly played on the Pakhawaj, Jhaptal consisting of ten maathras, Roopak taal of seven maathras, and Teen Tala of sixteen maathras.

Violin is a widely accepted musical instrument of foreign origin which has an unavoidable presence in Indian classical music.

Some of the famous musicians

Ariyakudi Ramanuja Iyengar (1890-1967) • Maharajapuram Viswantha Iyer (1896-1970) • Papanasam Sivan (1890-1973) • Mysore Vasudevachariar (1865-1961) • Madurai Mani Iyer (1912-1968) • M.D. Ramathan (1923-1984) • Chembai Vaidyanatha Bhagavathar (1896-1974) • Pt. Vishnu Digambar Paluskar (1872-1931) • Ustad Faiyaz Khan (1886-1956) • Pt. Omkarnath Thakur (1897-1967) • Ustad Bade Gulam Ali Khan (1903-1968) • Pt. Mallikarjun Mansur (1910-1992) • Kumar Gandharva (1924-1992).

Some of the famous instrumentalists

Sarod: Ali Akbar Khan, Allauddin Khan, Amjad Ali Khan, Buddhadev Des Gupta,

Bahadur Khan, Sharan Rani, Zarin S. Sharma

Tabla: Alla Rakha Khan, Kishan Maharaj, Nikhil Ghosh, Zakir Hussain

Violin: Baluswamy Dikshitar, Gajanan Rao Joshi, Lalgudi G. Jayaraman, M.S. Gopalakrishnan, Mysore T. Chowdiah, T.N. Krishnan

Shehnai: Bismillah Khan

Sitar: Nikhil Banerjee, Ravi Shankar, Vilayat Khan, Hara Shankar Bhattacharya

Flute: Hari Prasad Chaurasia, Pannalal Ghose, T.R. Mahalingam

Veena: K.R. Kumaraswamy Iyer, Doraiswamy Iyengar.

Dances

Dance in India has an unbroken tradition of over 2000. Two main divisions of its forms are classical and folk. Classical dance forms are based on ancient dance discipline and have rigid rules of presentation. Important among them are Bharata Natyam, Kathakali, Kathak, Manipuri, Kuchipudi and Odissi.

Folk dances of India vary according to the region and have no specific grammar. They fit in with the scheme of festivals in each region.

Some of the famous dancers

Bharatanatyam: Bala Saraswati, C. V. Chandrasekhar, Leela Samson, Mrinalini Sarabhai, Padma Subramanyam, Rukmini Devi, Sanyukta Panigrahi, Sonal Mansingh, Yamini Krishnamurthi

Kathak: Bharati Gupta, Birju Maharaj, Damayanti Joshi, Durga Das, Gopi Krishna, Kumudini Lakhia, Sambhu Maharaj, Sitara Devi

Kuchipudi: Josyula Seetharamaiah, Vempathi Chinna Sathyam

Manipuri: Guru Bipin Sinha, Jhaveri Sisters, Nayana Jhaveri, Nirmala Mehta, Savita Mehta

Odissi: Debaprasad Das, Dharendra Nath Pattnaik, Indrani Rahman, Kelucharan Mahapatra, Priyambada Mohanty, Sonal Mansingh.

Education: Problems and Solutions

U R Ananthamurthy

I have made a thorough survey into the issue of the closure of a large number of Government schools in Kerala. The former Chief Minister, Mr. A.K. Antony, had invited me to be chairman of a committee to study this issue. One of the things which the government thought was ailing the system was the closing down of a large number of government schools and these schools had protected teachers. The other notion was that there was a fall in population in Kerala and there were not as many children, as they were, to attend school. But I found this to be a wrong assumption. Most children attended private schools because they wanted English. Parents, who could afford it, sent their children to private schools.

I also found that most private schools were staffed by teachers who were not as good as government school teachers, who were not only far superior in their teaching methods, but also continued to receive further training. English, as a language, was taught in government schools only from standard V. Hence, parents were ready to sacrifice good education, which they were getting in government schools, for very poor education being imparted in many English-medium private schools.

One of my suggestions to the government of Kerala to put an end to this was to give students, in government primary schools, English from standard I. Children need not be taught to read or write English because English is a very irrational language as far as writing skills are concerned. If you learn the Malayalam alphabet, you can read

Malayalam. If you learn the English alphabet, you cannot learn English. Hence, I suggested that children be taught to speak English, not read/write the language. I even suggested that teachers use subjects like cricket to get children to speak the language. Let the teacher initiate some discussion in English on the game of cricket. Give everyone a feeling that English can be domesticated and used. Making all kinds of mistakes does not matter because it is just another language for standard I students. Middle class parents would then send their children to good government schools. I also found that there were a couple of government schools in Trivandrum, which were sought after by parents, because many officials sent their children to these schools and ensured that the schools were good. I presumed that if all our children went to the same kind of school, a neighbourhood school, parents would take some interest in improving the school.

Common School Legislation

Nothing will improve the schools until we bring in the Common School legislation. If it is difficult to legislate for a common school, we can do two or three things. One, give common schools English from Standard I so that children, particularly in Kerala where they need a language skill because they cannot get jobs in their home state, get access to the English language. However, we could teach all other subjects in Malayalam because the learning skills are quicker in one's own language. After a certain level, if children have to shift to English medium, they will shift eas-

ly, without any trauma. Now, there is a trauma in shifting to the English medium after class X or so. Another concrete suggestion, which would find acceptance among middle class parents, is to ensure that in all English medium schools, one of the subjects should be taught in the mother tongue. I say this because boys and girls are now divided into classes—poor vs rich, underprivileged vs privileged. Let's not do that. Even privileged children, who attend English medium schools, should learn at least one subject in their own language. I suggested Humanities or Social Sciences because the only concern of most parents is that their children ultimately enter the IITs or medical colleges! So, they want only Science and Mathematics in English. This is a compromise. I am not saying that it is an ideal solution, but we can not remove English medium schools as the minorities have a right to start their schools. However, we can at least ensure that children's skills in Humanities are developed in their mother tongue.

There is a central legislation contemplated that children should not have to travel a long distance to attend school. It is a legislation that all private schools have a certain percentage of students from the neighbourhood. These children should be enrolled automatically and not through "interviews" because interviews for such young children are meaningless and every child has the right to education. As for the fees, because many parents may not be able to afford private school fees, the government should give private schools whatever money they had earmarked for these children in their own schools.

Concepts such as teacher training will not work unless parents take an active interest and have a stake in their children's schooling. Parents will take an interest only when those who have a stake in education send their children to government schools.

There is some corruption also in the appointment of teachers. I have heard from

teachers of aided schools in Kerala, where the salary is paid by the government but where teachers are selected by private school managements, that they had to pay between Rs.5-10 lakh to get a post. So I proposed, in my recommendations which are still pending before the government, that all teachers be selected through Public Service Commission. The managements of private schools should be allowed to choose teachers from this selected list. We hope, then, that there would not be much corruption.

If possible, a few other legislations can be made if there is a will. A teacher should be appointed to a particular school. This will ensure that teachers are not transferred frequently. A school develops because of the commitment of teachers who stay there for a few years. Those who have a need for the job know that they have to stay on at the place of their posting. It is a commitment which they must make, willy-nilly. It does not mean that the school should become a prison for the teacher! The fact remains that certain schools in backward areas never get teachers. The appointed teachers use their political influence and get transferred to a cushy place.

Creation of Knowledge

We have a wrong notion of education. We believe that education is knowledge transfer from the teacher to the students. Hence, there is a lot of learning by heart. I found whether in Kerala, Karnataka or anywhere in India, memorizing is a skill which is very useful in music, in poetry, in theatre but utterly useless in Science! The mode of instruction should be creation of knowledge, rather than transference of knowledge. The teacher and the students should create knowledge, together. I know of an instance where a child was very bothered that he could not see the moon at all on a particular day of the month! If a child is so bothered about the moon's disappearance, then there is immense poten-

tial to teach astronomy to the child. We have to nurture a child's natural curiosity.

Even our President makes a mistake. He thinks that computers can help us. Not computers, but our fingers and our hands can help us. I would encourage a child to bring a broken radio to the classroom and take it apart further, before putting it together. We should create knowledge that stays with the child. This needs a different kind of approach where textbooks will disappear. What ails education everywhere is this business of textbooks. There is a lot of corruption involved in writing textbooks. So, bad textbooks are written. Children's education is postponed because textbooks are not ready, on time. We can do away with textbooks and instead have workbooks for the guidance of the teacher.

Many of the best schools, in Karnataka or Kerala, do not have a library. A library is not merely a place where you read/borrow books. There should be audio-visual equipment which the children can use to listen to music or play games. Audio-Visual equipment helps because at one time the ratio between the teacher and the pupils was good and strictly followed. Now, there are more pupils and few teachers. We can deal with the problem of lack of teachers in some schools, by using audio-visual equipment, wisely. Library hours must be shown in the time-table. Children should be able to pull out any book they want and read what they want. When schools choose their staff, the librarian must be seen as a very necessary person. What happens in most schools is that some teacher is given library work. This teacher uses the library only in his/her free time.

Today, a school is detached from its surroundings. This was not so in the past. Villagers went to a school teacher with their everyday problems. A village school teacher would read/write their letters. A teacher, in the past, was a part of the community. To improve school education in India, the first thing we should do is stop blaming teachers.

Blaming the teachers has become a good excuse for us not to do many things. We should make use of local resource people. If there is a good story teller in a taluka/village, make her a visiting teacher. She may not have any degree. She may even be non-literate. It does not matter. One of the skills, fast disappearing in our school system, is the capacity to tell stories. Children don't know how to tell stories. Story-telling, music and theatre should be important components of the school curriculum. To develop cultural skills in children, we should use people in the community such as good singers, talented theatre people and gifted story-tellers.

There is a problem in every school when we evaluate a student. Students are usually marked on their mathematical and memory skills. First class or Second class is meaningless as far as the child's ability to learn is concerned. There is a subtle thing that can be done to change this. Sometimes, I find that the most mischievous student, who may not do well in English/Mathematics/Science, is the one who can dance; who can perform many tricks and who is a very good mimic. If cultural skills are made a part of the curriculum-extra curricular and co-curricular are very wrong words to use, please drop these words—it helps to draw the overall portrait of the child.

'Maths, a Birthright'

Regarding Mathematics, which is often considered a bugbear, we should adopt the slogan 'Mathematics is the birthright of every child.' As a teacher, do not assume that Mathematics is only for the skilled ones.

I also want the SSLC exams to be removed. Quite a few unnecessary deaths happen because of class X board exams. There should be a rule that students who are in class X will go to class XI. But if a student wishes to leave his/her present school to join another school, then there can be an exam for such students where they are graded, not marked. The exam

make many innovations. To overcome the weaknesses of many schools, we can make "clusters" of schools. A school cluster could help in the evaluation of teaching methods and improvement of teachers' skills. Evaluation is not an ultimate judgement to be passed on the student. Instead, it is part of the creative process of teaching and learning.

The Right to Education should apply till class XII. There should be a long period to develop children's skills. In class XI and XII, if art has been made part of the curriculum, some extraordinarily gifted children should be able to opt for cultural subjects. I had some experience of this when I was in Kerala. The parents of a boy called Shankaran Namboodiri, now a very famous vocalist, came to me and said their son was short of attendance and would not be able to take his exams. I told them the whole idea was silly! I believed that Shankaran Namboodiri had as much of a right to take the exam as much as he had to create music. Why should we think that what he is doing—creating music—is meaningless and a waste? We should change the whole idea of education so that all skills are accounted for.

These are some measures which can succeed only if we have faith in the Common Schools where children of various capacities and abilities learn together. It is a challenge for teachers to devise methods by which they can cater to slow learners and fast learners.

More than any other state in India, I think Kerala is at the take-off point. It has achieved full literacy. In the Muslim districts, where I had some of my best meetings, people were very eager that their children received regular, mainstream education. They wanted their daughters to attend school. So far as people's attitudes were concerned, there was no problem at all. The Muslims were very eager for mainstream education although they wanted their 'madrasas'. They were willing to make adjustments between the 'madrasas' and the mainstream school. When you have that

kind of willingness of the people, then there is no real problem.

The problem is with us. In our desire to maintain a certain kind of class system in having different kinds of schools, we do not pay enough attention to common schools. There is a lot for every child to learn from another child, in a common school. We should treat children as equal; as capable of any learning. Assumptions that children from affluent families are better than children from low income families are not well tested. There may be other psychological factors that make children, from low income families, slow learners. It is the responsibility of the school to overcome such problems. Then, there will be fewer drop-outs.

Children Belong to Society

Children belong to the whole society and not merely to their parents. A child cannot be abused. Making a child travel in a bus for 2 hours to reach school is an abuse. We should stop this. Neighbourhood schools are a good solution in a country like India where there is such a variety of people, castes and classes. If one has to have the sense of being an Indian citizen at the end, you need 'mixing' in schools.

I have talked to great creative people in Kerala like Adoor Gopalakrishnan and M T Vasudevan Nair and they agree with me that what made them creative is partly the fact that they went to a common school. I came from a very orthodox family. In my village, I used to wear a shirt to school and an 'angavastram' at home. I would hang my shirt on a nail when I entered the house. I believe and I say that I became a writer because of the shirt I wore, but not because of the 'angavastram'. The shirt I wore brought me in touch with children from other castes. It was another world altogether compared to my world at home. This is not happening now.

The kind of world, which children are exposed to at school, especially at the present, is a replica of their world at home. They meet

children who have the same toys and tools. I think this damages the learning process. Learning is also about learning how to live in a difficult country like India. The poor have such great survival skills and our rich children never come to know these skills. If our children are not street-wise, it means there is something lacking in their education.

Unfortunately, there is a lobby against common schools; a very strong lobby of private schools, especially in Kerala. To empower the common schools, we should teach spoken English. Everyone sees that those who know English get everything done, relatively easily. When I recommended this, there was an attempt to make it seem as if I were speak-

ing for English. It is not so. The Indian languages have always had to struggle—first with Sanskrit, now with English. Children need access to whatever is power today. We may criticize it, but the fact remains that knowing English is power today. But we must be conscious of the kind of English we wish to promote. English today is not a gateway to knowledge as it used to be in our times. Today, it's a language of the market forces. We must be aware of the dangers of this.

Our ideal should be Central Schools. In India, the Central Schools, with all their faults, have a certain achievement which every government school should aim at.

(As told to Kavitha Srinivas)

Town Planning

Jacob Easow, Engineer-Planner

Senior Town Planner, Department of Town and Country Planning, Kerala

The city, throughout the developing world is, in a sense, the sign and the success of the development process. Its success reflects the validity of Town Planning principles and strategies. Its failure and the resulting frustration, functional chaos, environmental degradation, unemployment and poverty, hunger and distress, bankruptcy, etc. point to the weakness and contradiction of the whole system.

It is fashionable these days in the developing world to condemn urbanisation as a costly and undesirable phenomenon, and urban growth as a menace. The large city is indeed considered as the symbol of the relative failure of urban planning. Urbanisation is inevitable, when pressure on land is high, agricultural income is low, and population increase is excessive. Even where rural jobs are avail-

able, drift to cities occurs, as it offers a promise of economic opportunity and social mobility. It should be recognized that urbanization is not a calamity but a necessity. Urbanisation is a positive force and urban growth is an impetus to development. Both accelerate industrialization to some extent, they permit change in the social structure by raising the level of human aspiration, facilitate the provision of public services to a large sector of the population, and make possible increased economic opportunities and improve living conditions for those people who remain in the rural areas.

The positive role of urbanisation can be materialized only if the cities are economically viable and capable of generating economic growth in a sustained manner. Urban and Regional Planning should be given due

consideration for building our cities / settlements as vibrant centres.

The Plan

In order to translate long-range goals and short-term objectives for the orderly development of a planning area, a tool (with technical guide lines and legal backing) is used by the town planner and this tool is known as 'Plan'. This Plan is a guideline or blueprint for the future development of the area. These Plans are known variously as 'Master Plan', 'Development Plan', 'Comprehensive Development Plan', 'General Plans', 'Structure Plan' etc, depending on the type of planning approaches and concepts. Plans are prepared in various hierarchies like region, city/town/village, and local.

Urban and Regional Planning process is a research-oriented exercise. It comprises two principles namely, theory in planning and theory of planning, former means the concepts taken from other disciplines and latter the concepts derived or arrived from the analysis of an existing settlement.

Ideals of Planning

Garden City Concept: This concept was defined in 1919 by the Garden City Association in agreement with Ebenezer Howard, the Father of the Garden City: "A Garden City is a Town designed for healthy living and industry; of a size that makes possible a full measure of social life but not larger; surrounded by a rural belt; the whole of the land being in public ownership or held in trust for the community". It is not a colony, but a complete working city for a population of 30,000 and more with a large central park containing public buildings surrounded by a shopping street. The central park and shopping street are surrounded by dwellings in all directions at a low density. The outer circle of factories and industries and the whole is surrounded by a permanent green belt.

La Ville Contemporaine (Concentric City): The City of Tomorrow for 3,00,000 people was proposed by Le Corbusier in 1922. This scheme was a city of magnificent sky scraper towers surrounded by broad and sweeping open space. Sixty-storey office buildings accommodating 1,200 people per acre and covering only 5% of the ground area were grouped in the heart of the city. The hub of the transportation centre consists of motor and rail lines, the roof of which is the airfield. Surrounding the skyscrapers was the apartment district, eight-story buildings arranged in zig-zag rows with broad open spaces. Outskirts were laid with the garden cities of single family houses. The residential zones contain schools, shopping centres, and recreational facilities.

Neighborhood Concept: Lewis Mumford in the book '*The Culture of Cities*' (1938) advocated 'Neighborhood Unit Concept'. Usually a neighborhood unit is defined based on a set of social relationships. The physical size is determined by the convenient walking distance for children between the farthest house and the school and playground in which a major part of their activities are focused.

Masterpieces from India

Jaipur: The city of Jaipur, the *Pink City*, can be described as a good example of a planned city. The city was built in 1753 on a carefully prepared plan, broad avenues and public buildings. Sawai Ramsingh gave the city its universal pink colour. Jaipur has originally well laid roads with geometric precision and arithmetic accuracy, systematically open squares and fountains.

New Delhi: The capital of India was planned in 1911 by Sir Edward Lutyens and Sir Herbert Baker from England. It is laid out in the Versailles style of Renaissance.

Chandigarh: Chandigarh may be said to have started a new movement in the plan-

ning of towns and public buildings in India. The famous architect-planner of French origin Le Corbusier in collaboration with Maxwell Fry and Jane Drew of England and P.L Varma, chief engineer of the state prepared the master plan of Chandigarh. The city is planned for a population of 500,000 and conceived as a human body. Thus placed the Secretariat building and the Legislature Complex, being the head and the brain of the city, at the top (northern end). Industries were placed at the southern end, to give a strong footing or base to the city, as the legs do. The city-centre being the heart was placed at the centre. The entire communication system was conceived as arteries and blood vessels, to interconnect the various parts of the city and to facilitate the smooth flow of men and materials.

Recent Trends

Sustainable Development Approach

Since the presentation of the Brundtland Commission's report *Our Common Future* in (WCED, 1987), the term 'sustainable habitat' (sustainable urban development) has been increasingly used by Urban Planners. Different physical solutions have been launched as models for a sustainable city/ habitat. Also, different procedures have been recommended to lead current town plan and development on to a more sustainable course.

Several dimensions of physical form and spatial structure are discussed in the light of the main criteria of a sustainable development. If a sustainable development is to be achieved, it is necessary to avoid further urban sprawl. Low density, dispersed cities can hardly be energy efficient. Therefore a strategy for more compact cities was proposed with long-term and global goals. The Plan in this approach is termed as sustainable development plans.

Smart Growth and New Urbanism

Perhaps the most valuable tool in the Smart

Growth toolkit is New Urbanism. While Smart Growth principles support higher density, mixed-use, walkable environments, New Urbanism is proving to be the most successful method for making these Smart Growth goals achievable. New Urbanism is an urban design movement that aims to reform urban planning and real estate development toward building more human-scaled and walkable communities. It is a reaction against the predominant development pattern of the mid-to late-20th century—low-density, generic development types that are separated by use and tied together by roadways and parking lots. New Urbanism is strongly influenced by the traditional urban patterns that dominated up to the 1920s, although it modifies these patterns to address the contemporary realities of the demand for larger homes, the greater use of automobiles and large scale retail formats. It reforms the design of built environment, and is about raising the quality of life and standard of living by creating a better place to live. New Urbanism is the revival of our lost art of place-make-up and is essentially a reordering of the built environment into the form of complete cities, towns, villages and neighborhoods. New Urbanism implies fixing and infilling cities, as well as the creation of compact new towns and villages. The principles of New Urbanism are

Walkability—Most things within a 10 minute walk of home and work

Connectivity—Pedestrian network

Mixed-use and diversity

Mixed housing

Quality architecture and urban design

Traditional neighborhood structure

Smart Transportation—A network of high-quality train

Sustainability—Minimal environmental impact, Eco-friendly technologies, Energy efficiency, more local production more walking, less driving

Quality of Life. Enrich, uplift and inspire the human sprinks.

Participatory Spatial Planning

Enactment of constitution 73rd and 74th Amendment Act in 1992 was the major event in democratic decentralization in India. The state of Kerala, well known for imparting education, healthcare, public distribution system, etc down to grass-root level, has been a pioneer on decentralized planning also. In 1996, a new planning process was introduced in Kerala through the launching of people's campaign for decentralized planning, popularly known in Malayalam as '*Janakeeyasoothranam*'. People's planning campaign was successful in terms of both participation as well as allocation of funds but lacked scientific skill of development planning such as spatial planning techniques and use of modern technologies. Such an innovative experiment for the preparation of development plans is now being implemented as a pilot project in Kollam District of Kerala State. The basic concept was designed in 2003 by the Department of Town Country Planning, Kerala.

In this concept two level plans are prepared simultaneously- one at the lowest tier of local government (Panchayat / Municipalities) i.e. Local Development Plan (LDP); and other for the District as a whole, an Integrated District Development Plan (IDDP). Here, the direct participation of people is ensured through village/ward sabhas and various working groups ensure the balanced involvement of elected representatives, government departments, NGOs, stakeholders, etc. This is the uniqueness of this participatory town planning process. Unlike other spatial plans prepared in this country, specialty of IDDP and LDP is that the sectoral policies of various development agencies of the planning area are translated to spatial plans. The concept of the planning process based on a combination of top-down and grass-root-up approach is a good example for multi-level planning. Thus 100 percent planning of the district, both in regional level (IDDP) and settlement level (87 LDPs), for Kollam is expected to complete by the end of 2006, which will become a model for other districts of India. ■

Planning of Early Towns

Ur-Babylon, Khafage and Eshnunna are good examples of oldest organized settlements in Euphrates and Tigris river basins. Description by Herodotus on Ur-Babylon says that it extends to an area of 1400 acres with a population of 2000 in a square pattern 120 furlong each way. Roads are all straight and in grids with bronze gates at entry. A river cuts the city into two but is surrounded by a great wall. Another great wall encircles the city centre. Royal Palace and ziggurat (Temple), located face to face on the bank of the river is surrounded by a wall. Ziggurat is one furlong square built with clay bricks and having eight storeys. Primary communica-

tion of town is by water.

In the Indian Sub-continent, towns like Mohanjodaro and Harappa of the Indus Valley civilization are the most important. Carbon test of the excavation reveals the approximate period of the civilization as 3000 BC or earlier. Historians claim that the identifiably independent culture at Mohanjodaro and Harappa was marked by developments of wheels, use of metals, knowledge of arithmetics, use of coinage, art of expression and representation, and architecture and planning techniques. Both towns are located along the trade routes of the Indus River.

Ready Reckoner: States

| State/UTS | Capital | Governors | Chief Ministers |
|-------------------|-------------------------------------|--------------------------------------|----------------------------|
| Andhra Pradesh | Hyderabad | Rameshwar Thakur | Dr. Y.S. Rajasekhara Reddy |
| Arunachal Pradesh | Itanagar | Shulendra Kumar Singh | Gegong Apang |
| Assam | Dispur | Lt.Gen.(Retd.) Ajai Singh | Tarun Kumar Gogoi |
| Bihar | Patna | R.S. Gavai | Nitish Kumar |
| Chhattisgarh | Raipur | Lt. Gen.(Retd.) K.M. Seth | Dr. Raman Singh |
| Goa | Panaji | S.C. Jamir | Pratapsingh Raoji Rane |
| Gujarat | Gandhinagar | Naval Kishore Sharma | Narendra Modi |
| Haryana | Chandigarh | Dr. A.R. Kidwai | Bhupinder Singh Hooda |
| Himachal Pradesh | Shimla | Just. Vishnu Sadashiv Kokije (Retd.) | Virbhadra Singh |
| Jammu & Kashmir | Srinagar (Summer)
Jammu (Winter) | Lt. Gen. (Retd.) S.K. Sinha | Ghulam Nabi Azad |
| Jharkhand | Ranchi | Syed Sibtey Razi | Madhu Koda |
| Karnataka | Bangalore | T.N. Chaturvedi | H. D. Kumaraswamy |
| Kerala | Thiruvananthapuram | R.L. Bhatia | V. S. Achutanandan |
| Madhya Pradesh | Bhopal | Balram Jakhar | Shivraj Singh Chauhan |
| Maharashtra | Mumbai | S.M. Krishna | Vilasrao Deshmukh |
| Manipur | Imphal | Dr. Shivinder Singh Sidhu | Okram Ibobi Singh |
| Meghalaya | Shillong | M.M. Jacob | J. D. Rymbai |
| Mizoram | Aizawal | Lt. Gen. (Retd.) M.M. Lakhera | Zoramthanga |
| Nagaland | Kohima | Shyamal Datta | Neiphiu Rio |
| Orissa | Bhubaneswar | Rameshwar Thakur | Naveen Patnaik |
| Punjab | Chandigarh | Gen (Retd.) S.F. Rodrigues | Captain Amarinder Singh |
| Rajasthan | Jaipur | Smt. Pratibha Pabli | Smt. Vasundhara Raje |
| Sikkim | Gangtok | V. Rama Rao | Pawan Chamling |
| Tamil Nadu | Chennai | Surjit Singh Barnala | M. Karunanidhi |
| Tripura | Agartala | Dinesh Nandan Sahaya | Manik Sarkar |
| Uttar Pradesh | Lucknow | T.V. Rajeswar | Mulayam Singh Yadav |
| Uttaranchal | Dehradun | Sudershan Agarwal | Narain Dutt Tiwari |
| West Bengal | Kolkata | Gopal Krishna Gandhi | Buddhadev Bhattacharya |

National Capital Territories

| Capital Territory | Capital | Lt. Governor | Chief Minister |
|-------------------|---------|--------------|---------------------|
| Delhi | Delhi | B.L. Joshi | Smt. Sheila Dikshit |

Union Territories

| State/UTS | Capital | Lt. Governors/Administrator | Chief Minister |
|-------------------|-------------|--------------------------------------------|----------------|
| Andaman & Nicobar | Port Blair | Lt. Gen. (Retd.) M.M. Lakhera | - |
| Chandigarh | Chandigarh | Gen.(Retd.) S.F. Rodrigues (Administrator) | - |
| Dadra & N Haveli | Silvassa | Rajnikant Verma (Administrator) | - |
| Daman & Diu | Daman | Rajnikant Verma (Administrator) | - |
| Lakshadweep | Kavaratti | Rajendra Kumar (Administrator) | - |
| Pondicherry | Pondicherry | Mukut Mittal | - |

States of India

India, for administrative purposes, is divided into the national capital territory of Delhi, 28 states, and 6 centrally administered union territories.

States: Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Goa, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttaranchal, Uttar Pradesh, West Bengal.

Union Territories: Andaman and Nicobar Islands, Chandigarh, Dadra & Nagar Haveli, Daman & Diu, Lakshadweep, Pondicherry.

National capital territory: Delhi

Top 10 States of India - populationwise

| Rank | State/UT | Population in 2001 |
|------|----------------|--------------------|
| 1. | Uttar Pradesh | 166,052,859 |
| 2. | Maharashtra | 96,752,247 |
| 3. | Bihar | 82,878,796 |
| 4. | West Bengal | 80,221,171 |
| 5. | Andhra Pradesh | 75,727,541 |
| 6. | Tamil Nadu | 62,110,839 |
| 7. | Madhya Pradesh | 60,385,118 |
| 8. | Rajasthan | 56,473,122 |
| 9. | Karnataka | 52,733,958 |
| 10. | Gujarat | 50,596,992 |

UTs

| | | |
|----|-----------------------------|---------|
| 1. | Pondicherry | 973,829 |
| 2. | Chandigarh | 900,914 |
| 3. | Andaman and Nicobar Islands | 356,265 |
| 4. | Dadra and Nagar Haveli | 220,451 |
| 5. | Daman and Diu | 158,059 |

States of India - areawise

| Rank | State/UT | Size (Area in Sq. km.) |
|------|-------------------|------------------------|
| 1. | Rajasthan | 342,236 |
| 2. | Madhya Pradesh | 308,144 |
| 3. | Maharashtra | 307,713 |
| 4. | Andhra Pradesh | 275,068 |
| 5. | Uttar Pradesh | 238,566 |
| 6. | Jammu and Kashmir | 222,236 |
| 7. | Gujarat | 196,024 |
| 8. | Karnataka | 191,791 |
| 9. | Orissa | 155,707 |
| 10. | Chhattisgarh | 135,194 |

UTs

| | | |
|----|-----------------------------|-------|
| 1. | Andaman and Nicobar Islands | 8,249 |
| 2. | Delhi | 1,483 |
| 3. | Puducherry | 492 |
| 4. | Dadra and Nagar Haveli | 491 |
| 5. | Chandigarh | 144 |

Beginning of States & UTs

The period between 1947 and 1950 witnessed the consolidation of the former princely states into new provinces, usually governed by a Rajpramukh, (Governor) appointed by the Governor-General of India. In 1950, the Indian constitution took effect, the office of the Governor-General was abolished, and India created several different categories of states.

Part A states, which were the former provinces, were ruled by an elected governor and state legislature. The Part A states (nine) were Assam, West Bengal, Bihar, Bombay, Madhya Pradesh (formerly Central Provinces and Berar), Madras, Orissa, Punjab, Uttaranchal, and Uttar Pradesh (formerly United Provinces).

The Part B states (eight) were former princely states or groups of princely states, governed by a Rajpramukh.

by a Rajpramukh. They were Hyderabad, Saurashtra, Mysore, Travancore-Cochin, Madhya Bharat, Vindhya Pradesh, Patiala and East Punjab States Union (PEPSU), and Rajasthan.

The Part C states (ten) included both former princely states and provinces. They were governed by a chief commissioner. The Part C states included Delhi, Kutch, Himachal Pradesh, Bilaspur, Coorg, Bhopal, Manipur, Ajmer, and Tripura.

J&K had special status until 1957. The Andaman and Nicobar Islands was a territory, ruled by a governor appointed by the Indian president.

The French enclaves of Pondicherry, Yanam, Karaikal, and Mahe, were administered by India after 1954, formally becoming a Union Territory in 1962. Dadra and Nagar Haveli was occupied by India in 1954, and Goa, Daman, and Diu in 1961, and they subsequently became UTs.

In 1953, the Telugu-speaking portion of Madras state voted to become the new state of Andhra Pradesh, the first of India's linguistic states.

In 1956, when the States Reorganisation Act took effect, the distinction between part A, B, and C states was gone, and instead state boundaries were drawn along linguistic lines. The new states, mostly the former Part A states, were Assam, West Bengal, Bihar, Maharashtra, Gujarat, Kerala, MP, Madras, Mysore, Orissa, Punjab, Rajasthan, and UP. Delhi, Himachal Pradesh, Manipur, Tripura, Pondicherry, the Andaman and Nicobar Islands, and the Laccadive, Minicoy, and Amandivi Islands became Union Territories. The remainder of the states were merged into the new states or UTs.

Several new states and UTs were created out of existing states since 1956. Haryana was created in 1966 out of Punjab. The UTs of Arunachal Pradesh, Meghalaya, Mizoram, and Nagaland were created out of Assam. In 2000, 3 new states were created; Jharkhand was created out of Bihar, Chhattisgarh out of MP,

Facts about India

• Standard time: 82°30' E • Most Populous District: Medinipur • Least Populous District: Yanam • Most Literate District : Aizawl • Largest State (areawise): Rajasthan • Smallest State: Goa • Most Populous State: UP • Least Populous State: Sikkim • Southernmost point: Indira Point • Max. N-S distance: 3,214 km • Max. E-W distance: 2,933 km • Golden Quadrilateral connecting 4 metros: distance: 5846 km • Major Ports on coastline : 12 : (181 others).

and Uttaranchal out of UP. The Kingdom of Sikkim was annexed to India as a state in 1975. In addition, several Union Territories have become states, namely Goa, Arunachal Pradesh, Meghalaya, Mizoram, and Nagaland.

Before 1947

The British India, was made up of two types of states, the Provinces and the Princely states. Provinces were ruled directly by British officials, either a governor or a chief commissioner, who were appointed by the Viceroy. Princely states were ruled by local, hereditary rulers, who acknowledged British sovereignty in return for local autonomy. British India had 15 provinces: Ajmer-Merwara, Assam, Baluchistan, Bengal, Bihar, Bombay, Central Provinces and Berar, Coorg, Delhi, Madras, Northwest Frontier, Orissa, Punjab, Sind, and United Provinces. British India had hundreds of princely states, which differed in size, and with wide variation in population. Most of the princely states were under the authority of a British political agent responsible to the governor of a province, but the four largest princely states, Hyderabad, Baroda, Mysore, and Jammu and Kashmir, were directly under the authority of the Governor-General of India. The Portuguese and the French had territories in India: Portuguese occupied Goa, Daman and

Rank of States (Categorywise)

| Rank | Population | Area | Density | Literacy | SC | ST |
|------|--------------|--------------|--------------|--------------|--------------|--------------|
| 1 | UP | Rajasthan | Delhi | Kerala | UP | MP |
| 2 | Maharashtra | MP | Chandigarh | Mizoram | WB | Maharashtra |
| 3 | Bihar | Maharashtra | Puducherry | Lakshadweep | Bihar | Orissa |
| 4 | WB | AP | Lakshdweep | Goa | AP | Gujarat |
| 5 | AP | UP | Daman & Diu | Chandigarh | TN | Rajasthan |
| 6 | TN | J&K | WB | Delhi | Maharashtra | Jharkhand |
| 7 | MP | Gujarat | Bihar | A&N Is. | Rajasthan | Chhattisgarh |
| 8 | Rajasthan | Karnataka | Kerala | Puducherry | MP | AP |
| 9 | Karnataka | Orissa | UP | Daman & Diu | Karnataka | WB |
| 10 | Gujarat | Chhattisgarh | Punjab | Maharashtra | Punjab | Karnataka |
| 11 | Orissa | Tamil Nadu | TN | HP | Orissa | Asom |
| 12 | Kerala | Bihar | Haryana | TN | Haryana | Meghalaya |
| 13 | Jharkhand | West Bengal | D&NH | Tripura | Gujarat | Nagaland |
| 14 | Asom | Arunachal | Goa | Uttaranchal | Jharkhand | J&K |
| 15 | Punjab | Jharkhand | Asom | Manipur | Kerala | Tripura |
| 16 | Haryana | Asom | Jharkhand | Punjab | Chhattisgarh | Mizoram |
| 17 | Chhattisgarh | HP | Maharashtra | Gujarat | Delhi | Bihar |
| 18 | Delhi | Uttaranchal | Tripura | Sikkim | Asom | Manipur |
| 19 | J&K | Punjab | AP | WB | Uttaranchal | Arunachal |
| 20 | Uttaranchal | Haryana | Karnataka | Haryana | HP | TN |
| 21 | HP | Kerala | Gujarat | Karnataka | J&K | Kerala |
| 22 | Tripura | Meghalaya | Orissa | Nagaland | Tripura | Uttaranchal |
| 23 | Meghalaya | Manipur | MP | Chhattisgarh | Chandigarh | HP |
| 24 | Manipur | Mizoram | Rajasthan | MP | Puducherry | D&NH |
| 25 | Nagaland | Nagaland | Uttaranchal | Asom | Manipur | Sikkim |
| 26 | Goa | Tripura | Chhattisgarh | Orissa | Sikkim | UP |
| 27 | Arunachal | A&N Is. | Nagaland | Meghalaya | Goa | Lakshadweep |
| 28 | Puducherry | Sikkim | HP | AP | Meghalaya | A&N Is. |
| 29 | Chandigarh | Goa | Manipur | Rajasthan | Arunachal | Daman & Diu |
| 30 | Mizoram | Delhi | Meghalaya | D&NH | Daman & Diu | Goa |
| 31 | Sikkim | Puducherry | J&K | UP | D&NH | Punjab |
| 32 | A&N Is. | D&NH | Sikkim | J&K | Nagaland | Chandigarh |
| 33 | D&NH | Chandigarh | A&N Is. | Arunachal | Mizoram | Haryana |
| 34 | Daman&Diu | Daman&Diu | Mizoram | Jharkhand | Lakshadweep | Delhi |
| 35 | Lakshadweep | Lakshadweep | Arunachal | Bihar | A&N Is. | Puducherry |

Diu, and Dadra and Nagar Haveli, while French had 5 enclaves - Chandemagore, Yanam, Pondicherry, Karaikal, and Mahe.

India and Pakistan, in 1947, divided its provinces and princely states along religious lines. Hyderabad's Muslim ruler tried to re-

main independent, but the intervention of Indian army made Hyderabad a part of India and Pakistan contested for control of princely state of J&K because the Muslim majority, but its Hindu ruler wanted to join India.

Andhra Pradesh

Date of Formation: 1 Oct. 1953 Andhra Part A state created from part of Madras; 1 Nov. 1956 Andhra Pradesh State.

Area: 2,75,069 sq. km.

Capital: Hyderabad

Neighbouring States/UT: Maharashtra, Chhattisgarh, Orissa, Karnataka, Tamil Nadu, Yanam (Pondicherry),

Population: 7,210,007; Males: 38,527,413; Females: 37,682,594; (a) Population Density: (persons per sq. km.): 277 (b) Sex Ratio: (Females per 1000 Males): 978

Literacy: (per cent): 60.5; Males: 70.3; Females: 50.4.

No. of Districts: 23

| District | Area
(sq km) | Population
(2001) | Head-
quarters |
|---------------------------|-----------------|----------------------|-------------------|
| Rayalaseema Region | | | |
| Anantapur | 19,130 | 36,39,304 | Anantapur |
| Chittoor | 15,152 | 37,37,437 | Chittoor |
| Cuddapah | 15,359 | 25,92,048 | Cuddapah |
| Kurnool | 17,658 | 35,24,073 | Kurnool |

Andhra Region

| | | | |
|---------------|--------|-----------|--------------|
| E. Godavari | 10,807 | 48,97,777 | Kakinada |
| Guntur | 11,391 | 44,55,445 | Guntur |
| Krishna | 8,734 | 41,81,071 | Modakuram |
| Nellore | 13,076 | 26,65,009 | Nellore |
| Prakasam | 17,626 | 30,54,921 | Ongole |
| Snikakulam | 5,837 | 25,31,752 | Snikakulam |
| Visakhapatnam | 11,161 | 38,16,820 | V. Patnam |
| Vizianagaram | 6,539 | 22,43,354 | Vizianagaram |
| W. Godavari | 7,742 | 37,99,213 | Eluru |

Telangana Region

| | | | |
|--------------|--------|-----------|--------------|
| Adilabad | 16,128 | 24,89,312 | Adilabad |
| Hyderabad | 217 | 38,26,094 | Hyderabad |
| Karimnagar | 11,823 | 35,00,876 | Karimnagar |
| Khammam | 16,029 | 25,69,158 | Khammam |
| Mahabubnagar | 18,432 | 35,09,182 | Mahabubnagar |
| Medak | 9,699 | 26,63,783 | Sangareddy |
| Nalgonda | 14,240 | 32,45,400 | Nalgonda |
| Nizamabad | 7,956 | 23,39,459 | Nizamabad |
| Ranga Reddy | 7,493 | 35,87,891 | Hyderabad |
| Warangal | 12,846 | 32,41,864 | Warangal |

Villages: 28123; **Towns:** 210

Governor: Rameshwar Thakur

CM: Dr. Y.S. Rajasekhara Reddy

Legislative Bodies: State Legislature: Unicameral - Seats: 294 (Reserved: SC-39, ST-15); Lok Sabha Seats: 42; Rajya Sabha Seats: 18 [The Parliamentary Standing Committee on Law and Justice has recommended reinstituting Legislative Council under Art. 169. It was abolished in 1985.]

Main Political Parties: Indian National Congress, Telugu Desam Party, Telengana Rashtra Samithi, Communist Party of India (Marxist), Communist Party of India, All India Majlis-E-Itehadul Muslimeen, Bharatiya Janata Party, Bahujan Samaj Party, Samajwadi Party

Seat of High Court: Hyderabad [Kurnool was the first capital of the Andhra state with the high court established at Guntur]

Chief Languages: Telugu and Urdu

Major Religions: Hinduism, Islam, Christianity

Main Towns: Hyderabad, Secunderabad, Karimnagar, Sirpur, Visakhapatnam, Vijaya wada, Cuddapah, Kakinada, Anantapur, Adilabad, Warangal, Nellore, Rajahmundry

Geography: (a) Rivers Godavari, Krishna, Chitravati, Papagni, Musi, Pranhita, Wain-ganga, Banda, Tungabhadra (b) Mountains: (Mt. Range- Eastern Ghat), Nalamala Hills, Satmala Hills, Erramala Hills, Horsley Hills, Palikonda Range, Velikonda Range; (c) Plateau: Telengana, Golconda, Rayalasima, Srisailem, Nalgonda, Warangal, Khammam; (d) Lake: Pulicat, Kolleru, Nagarjuna Sagar, Nizam Sagar. (e) Forest: 63,000 sq. km.

Economy: (a) Minerals: Chrysolite asbestos, barytes, copper ore, manganese, mica, coal and limestone. (b) Industries: machine tools, synthetic drugs, pharmaceuticals, heavy electrical machinery, fertilizers, cement, electronic equipment, watches, chemicals, asbestos, glass, etc.; (c) Agricultural Products: jowar, bajra, maize, ragi, sorghum, castor, tobacco, cotton, and products are cashew, eucalyptus

Transport & C

Length: National h

km., and State highways cover 60,453 km. There are 103,814 km of panchayati roads; (b) Railway Length: Railway routes cover 5,085 km; (c) Main Railway Stations: Hyderabad, Secunderabad, Guntakal, Warangal, Renigunta, Vijayawada, Visakhapatnam; (d) Airports: Hyderabad, Tirupati, and Visakhapatnam; (e) Ports: Visakhapatnam, Kakinada, Machilipatnam, Bheemunipatnam, Krishnapatnam, Vadarevu and Kalinga-patnam.

Employment: ('99-00)- 30,614,000; Unemployment: ('99-00)- 8.03%.

Education: (a) Schools: 91453; (b) Colleges: 1536; (c) Universities: 28.

Religious Places: Tirupati in Chittoor district is famous for Venkateswara temple - situated on the hilltop Tirumalai; the temple of Sriramachandra, Bhadrachalam; the Mallikarjunaswami temple, Srisailem; the Ahobila temple, Srikurman temple and the Simhachalam temple are other famous temples. Prashanthi Nilayam at Puttapurthi, is the abode of Sri Satya Sai Baba. Lepakshi, Mahastupa (Amaravati), Mecca Masjid, the largest mosque in south India, are the other attractions.

Culture: (a) Dances: Kuchipudi; (b) Festivals: Samkranti - Jan (Harvest festival); Visakh-Jan; Shivratri - Feb/Mar; Ugadi - Mar (Telugu New Year); Mahakali Yatra and Mrigasira-Jun/Jul; State Formation Day - 1 Nov. Industrial Exhibition - Jan/Feb.

Arunachal Pradesh

Date of Formation: 20 Feb 1987 State; 21 Jun 1972 Union territory created from part of Assam.

Area: 83,743 sq km

Capital: Itanagar

Neighbouring States/Countries:

Assam, Nagaland, (countries) Bhutan, Myanmar, China.

Population: 1,097,968; Males: 579,941;

Females: 518,027; (a) Population Density: 13; (b) Sex Ratio: 901

Literacy: 54.3; Males: 63.8; Females: 43.5.

No. of Districts: 13

| District | Area (sq km) | Population (2001) | Headquarters |
|-----------------|--------------|-------------------|------------------|
| Changlang | 4,662 | 1,24,994 | Changlang |
| Dibang Valley | 13,029 | 57,543 | Anini |
| East Kameng | 4,134 | 57,065 | Seppa |
| East Siang | 4,005 | 87,430 | Pasighat |
| Kurung Kumey | -- | -- | Laying-Yangte |
| Lohit | 11,402 | 1,43,478 | Tezu |
| Lower Subansiri | 10,135 | 97,614 | Ziro |
| Papum Pare | 2,875 | 121,750 | Itanagar (Yupia) |
| Tawang | 2,172 | 34,705 | Tawang |
| Tirap | 2,362 | 1,00,227 | Khonsa |
| Upper Siang | 6,188 | 33,146 | Yingkiong |
| Upper Subansiri | 7,032 | 54,995 | Daporijo |
| West Kameng | 7,422 | 74,595 | Bomdila |
| West Siang | 8,325 | 1,03,575 | Along |

Villages: 4,065; **Towns:** 17

Governor: Shilendra Kumar Singh

CM: Gegong Apang.

Legislative Bodies: State Legislature: Unicameral - Seats: 60 (59 seats reserved for ST); Lok Sabha Seats: 2; Rajya Sabha Seats: 1
Main Political Parties: Indian National Congress, Bharatiya Janata Party, Nationalist Congress Party, Arunachal Congress...

Seat of High Court: Guwahati

Chief Languages: Monpa, Miji, Aka, Sherdukpen, Nyishi, Apatani, Tagin, Hill Miri, Adi, Digaru Mismi, Idu-Mishmi, Khamti, Miju-Mishmi, Nocte, Tangsa, Wancho.

Major Religions: Buddhism, Hinduism, Christianity.

Main Towns: Itanagar, Tawang, Bomdila, Ziro, Seppa, Daporijo, Along, Pasighat, Yingkiong, Anini, Tezu, Khonsa, Walong.

Geography: (a) Rivers: Siang (name of Brahmaputra), its tributaries - Lohit, Subansiri, Dibang, Kameng, Dikrong River (famous for watersports). (b) Mountains: Great Himalaya, Lesser Himalaya, Assam Shiwalik: Dafia Hills, Miri Hills, Mishmi Hills, Abor Hills Peaks: Shallum-4336, Ddaphabum-4578; (c) Pass

Bum La, Tse La, Tunga, Yonggyap, Diphu, Kumjawng, Hpungan, Chaukan, Pangasau (d) Forest: 60% of the state (e) Wildlife: Namdapha NP, Monling NP.

Economy: (a) Minerals: Coal, dolomite, marble, lead, zinc, graphite; (b) Industries: sawmills, plywood (these two trades however have been stopped by law), rice mills, fruit preservation units and handloom handicrafts; (c) Agricultural Products: Among the crops grown here are rice, maize, millet, wheat, pulses, sugarcane, ginger and oilseeds. Arunachal is also ideal for horticulture and fruit orchards. [Agriculture is the primary driver of the economy. Jhum, the local word for shifting cultivation, which was widely practised among the tribal groups has come to be less practiced. The forest-products are the next most significant sector of the economy]

Transport & Communications: (a) Main Railway Stations: Bhalukpong; (b) Airports: Itanagar, Daparijo, Ziro, Along, Tezu, Pashigat. Shopping: Handicrafts, jackets, bags, Sherdukpan shawls are very popular.

Education: (a) Schools: 1901; (b) Colleges: 9; (c) Universities: 1

Culture: (a) Dances: Popir, Aji Lama, Hiiri Khaning, Cham, War dance; (b) Festivals: Mopin, Solung, Lossar, Booriboot, Dree, Si-Donyi, Reh, Nyokum, Chalo-loku.

Asom (Assam)

Date of Formation: 26 Jan 1950

Area: 78,438 sq km.

Capital: Dispur

Neighbouring States: Meghalaya, Arunachal Pradesh, Nagaland, Manipur, Tripura, Mizoram, West Bengal

Population: 26,655,528; Males: 13,777,037; Females: 12,878,491; Urban Population: 12.72%; (a) Population Density: 340; (b) Sex Ratio: 932.

Literacy: 63.3%; Males: 71.3; Females: 54.6

No. of Districts: 23

| District | Area (sq km) | Population (2001) | Headquarters |
|--------------------|--------------|-------------------|--------------|
| Barpeta | 3,245 | 16,42,420 | Barpeta |
| Bongaigaon | 2,510 | 926,315 | Bongaigaon |
| Cachar | 3,786 | 14,42,141 | Silchar |
| Darrang | 3,481 | 15,04,000 | Marigaon |
| Dhemaj | 3,217 | 569,469 | Dhemaj |
| Dhubri | 2,838 | 16,34,569 | Dhubri |
| Dibrugarh | 3,381 | 11,72,056 | Dibrugarh |
| Goalpara | 1,824 | 822,306 | Goalpara |
| Golaghat | 3,502 | 945,781 | Golaghat |
| Hailakandi | 1,327 | 542,978 | Hailakandi |
| North Cachar Hills | 4,888 | 186,189 | Naharlaguna |
| Jorhat | 2,851 | 10,09,197 | Jorhat |
| Kamrup | 4,345 | 25,15,030 | Cowahati |
| Karbi Anglong | 10,434 | 812,320 | Diphu |
| Karimganj | 1,839 | 10,03,678 | Karimganj |
| Kokrajhar | 3,129 | 930,404 | Kokrajhar |
| Lakhimpur | 2,277 | 859,325 | Lakhimpur |
| Morigaon | 1,704 | 775,874 | Morigaon |
| Nagaon | 3,831 | 23,15,387 | Nagaon |
| Nalbari | 2,257 | 11,38,184 | Nalbari |
| Sibsagar | 2,668 | 10,52,802 | Sibsagar |
| Sonitpur | 5,324 | 16,77,874 | Tezpur |
| Tinsukia | 3,790 | 11,50,146 | Tinsukia |

Villages: 26,312, **Towns:** 125

Governor: Lt. Gen (Retd.) Ajai Singh

CM: Tarun Kumar Gogoi

Legislative Bodies: State Legislature Seats: 126; Lok Sabha Seats: 14, Rajya Sabha Seats: 7

Main Political Parties: INC, ACP, BJP, NCP, Trinamool Congress, Samata Party, Samajwadi Party,

Seat of High Court: Guwahati.

Chief Languages: Assamese, Bengali

Major Religions: Hinduism, Islam, Buddhism.

Main Towns: Guwahati, Dispur, Tezpur, Silchar, Jorhat, Dibrugarh, Sibsagar, Karimganj, Tinsukia, Diphu, Dhemaj, Nagaon, Marigaon, Barpeta, Goalpara, Dhubri, Bongaigaon, Nalbari

Geography: (a) Rivers: Brahmaputra, Manas, Subansiri, Sonai; (b) Mountains: Maiti Hills, Rengma Hills, Barail Range. (c) Wildlife: Kaziranga National Park, Golaghat (for rhinos and elephants), Manas NP & C

Flamed National Park-Sonbpur, Pobhara WS-Morigaon, Dilu Salkhow NP-Tinsukla, Laokhowa WS-Nagaon, Patsha WS-N. Lakhimpur, Orang WS-Sonbpur

Economy: (a) Minerals: Oil and natural gas, coal, limestone; (b) Industries: Agro industries, refinery, cottage, handicraft, silk; (c) Agricultural Products: Rice, jute, tea, cotton, oilseeds, sugarcane, potato, orange, pineapple.

Transport & Communications: (a) Road Length: 4,000 km; (b) Railway length 2,391.76 km; (c) Main Railway Stations: New Mangalgaon, Maligaon, Dibrui, Mangla, Lumding, Jorhat; (d) Airports: Dibrugarh, Guwahati, Jorhat, Silchar, Lakhimpur and Tezpur.

Temples: Kamakhya temple (Nilachal hills), Umananda mandir (Peacock Is.), Navagraha mandir (Chitrachal hill).

Shopping: Sualkuchi (famous for muga silk, endi and pat). Handicrafts: bamboo articles, cane, brass and metal crafts. Assam is famous for varieties of silk, bangles, clay dolls, pottery, woodworks, mattresses, etc.

Education: (a) Schools: 42415; (b) Colleges: 311; (c) Universities: 7

Employment ('99-00): 7,647,000; Unemployment ('99-00): 13.03%.

Culture: (a) Dances: Bongaill Bihu, Rohang Bihu, Magh Bihu, Kongali; (b) Festivals: Bihuakhil.

Bihar

Date of Formation: 15 Aug., 1947 (Province); 26 Jan. 1950 state (until 1956: part (A))

Area: 94,163 sq km

Capital: Patna

Neighbouring States/countries: Jharkhand, UP, West Bengal, (Nepal)

Population: 82,998,509; Males: 41,241,725; Females: 39,754,714; (a) Population Density 883; (b) Sex Ratio 919

Literacy: 47.0%; Males: 59.7; Females: 33.1.

No. of Districts: 37

| District | Area (sq km) | Population (2001) | Headquarters |
|----------------|--------------|-------------------|--------------|
| Araria | 2,797 | 21,24,811 | Araria |
| Aurangabad | 3,369 | 20,04,260 | Aurangabad |
| Banka | 3,020 | 16,01,778 | Banka |
| Begusarai | 1,089 | 23,42,989 | Begusarai |
| Bhagalpur | 2,302 | 24,30,331 | Bhagalpur |
| Bhojpur | 2,337 | 22,31,413 | Arrah(Arka) |
| Buxar | 1,634 | 14,03,462 | Buxar |
| Darbhanga | 2,507 | 32,05,473 | Darbhanga |
| Gaya | 4,941 | 34,64,903 | Gaya |
| Gopalganj | 2,003 | 21,42,343 | Gopalganj |
| Jahanabad | 1,569 | 15,11,400 | Jahanabad |
| Jamui | 2,997 | 1,397,474 | Jamui |
| Kaimur | 1,840 | 12,84,575 | Mahua |
| Katihar | 1,010 | 23,89,511 | Katihar |
| Khagaria | 1,486 | 12,76,677 | Khagaria |
| Kishanganj | 1,239 | 12,94,063 | Kishanganj |
| Lakhisarai | 1,229 | 801,173 | Lakhisarai |
| Munger | 1,419 | 11,35,429 | Munger |
| Sheikhpura | 689 | 3,25,137 | Sheikhpura |
| Madhepura | 1,797 | 15,24,596 | Madhepura |
| Madhubani | 3,478 | 35,70,651 | Madhubani |
| Muzaffarpur | 3,121 | 32,41,836 | Muzaffarpur |
| Nalanda | 2,362 | 23,68,327 | Biharbani |
| Nawada | 2,498 | 18,09,425 | Nawada |
| Panchthul | | | |
| Champan | 4,250 | 30,43,044 | Bethah |
| Patna | 1,130 | 47,09,851 | Patna |
| Prabha Champan | 4,155 | 39,13,636 | Motihari |
| Purnea | 3,203 | 25,40,788 | Purnea |
| Rohang | 3,818 | 24,48,762 | Savarani |
| Saharsa | 1,196 | 15,06,418 | Saharsa |
| Samastipur | 2,579 | 34,11,413 | Samastipur |
| Saran | 2,624 | 32,51,474 | Chhapra |
| Sheohar | 443 | 514,288 | Sheohar |
| Siwan | 2,628 | 26,69,887 | Siwan |
| Supaul | 2,211 | 27,08,840 | Supaul |
| Varanasi | 1,295 | 22,12,889 | Varanasi |

Villages: 45,091; **Towns:** 130.

Governor: RS Goyal

CM: Nitish Kumar

Legislative Bodies: State Legislature: Bicameral - Seats: 243, Legh. Council: 25; Lok Sabha Seats: 40; Rajya Sabha Seats: 16

Main Political Parties: Bharatiya Janata Party, Rashtriya Janata Dal, INC, NCP, CPI, BSP, CPI(M), Janata Dal (United), CPI, Samajwadi Party, Lok Jan Shakti Party...

Seat of High Court: Patna

Chief Languages: Hindi, Urdu, Santhali

Major Religions: Hinduism, Islam, Buddhism, Christianity.

Main Towns: Gaya, Bihar Sharif, Bhagalpur, Purnia, Muzaffarpur, Bettah, Motihari, Siwan, Munger, Bhagalpur, Ara, Chhapra, Sasaram, Buxar.

Geography: (a) Rivers: Ganga, Gandak, Burhi Gandak, Son, Saryu (Ghaghara), Kosi, Kamla, Panar, Saura, Lakhandai, Keul, Ghuari, Pun-pun; (b) Mountains: Bapabar Hills, Mandargiri Hills, Kharagpur, Rajgir, Mirzapur, Kaimur Plateau, Nawada Upland; (c) Plains North Bihar Plains, South Bihar Plains, Saran, Lower Son, Bettiah, Motihari, Sitamarhi, Madhubani, Saharsa, Aaria, Dharampur, Katihar, Bhagalpur (d) Valmiki Nat. Park

Economy: (a) Minerals: Ilmenite, Kaolin, Limestone, Mica, fuller's earth; (b) Industries: cotton spinning mills, sugar mills, jute mills and leather industries; (c) Agricultural Products: rice, wheat, maize and pulses, cash crops like sugarcane, oilseeds, tobacco, jute and potato.

Transport & Communications: (a) Road Length: 13412.80 km (in 2001); (b) Main Railway Stations: Patna, Muzaffarpur, Samastipur, Gaya, Katihar; (d) Airport Patna

Shopping: Sikki-stemmed colour-glass work, kasida-embroidery, sujamis and tikuli-ornamental works on glass, besides handicrafts, toys, metal works, etc.

Education: (a) Schools: 54120; (b) Colleges: 790; (c) Universities: 23

Employment ('99-00): 30,355,000; Un-Employment ('99-00): 7.32%.

Culture: (a) Dances: Seraikella; (b) Festivals: Chhath, tribal -Sarhul, Karam

Andhra Pradesh, Maharashtra, UP Jharkhand

Population: 20,833,803; Males: 10,474,218; Females: 10,359,585; Urban Population: 20.08%; (a) Population Density 154; (b) Sex Ratio: 990

Literacy: 64.7%; Males: 77.4; Females: 51.9.

No. of Districts: 16

| Distnct | Area (sq km) | Population (2001) | Head-quarters |
|----------------------|--------------|-------------------|----------------------|
| Bastar | 17,016 | 13,02,253 | Jagdalpur |
| Bilaspur | 8,569 | 19,93,042 | Bilaspur |
| Dantewada | 15,610 | 7,19,065 | Dantewada |
| Dhamtari | 4,081 | 7,03,569 | Dhamtari |
| Durg | 8,702 | 28,01,757 | Durg |
| Janjgir Champa | 4,467 | 13,16,140 | Janjgir |
| Jashpur | 6,457 | 739,780 | Jashpur |
| Kanker | 6,434 | 6,51,333 | Kanker |
| Kabirdham (Kawardha) | 3,958 | 5,84,667 | Kabirdham (Kawardha) |
| Korba | 5,769 | 10,12,121 | Korba |
| Kona | 5,978 | 5,85,455 | Baikunthpur |
| Mahasamund | 4,963 | 8,60,176 | Mahasamund |
| Raigarh | 6,528 | 12,65,084 | Raigarh |
| Raipur | 13,445 | 30,09,042 | Raipur |
| Rajnandgaon | 8,023 | 12,81,811 | Rajnandgaon |
| Sarguja | 16,034 | 19,70,661 | Ambikapur |

Villages: 20,308; **Towns:** 97.

Governor: Lt. Gen. (Retd.) K.M. Seth

CM: Dr. Raman Singh

Legislative Bodies: State Legislature

Seats: 90; Lok Sabha Seats: 11; Rajya Sabha Seats: 5

Main Political Parties: BJP, INC, BSP, etc.

Seat of High Court: Bilaspur

Chief Languages: Hindi

Major Religions: Hinduism

Main Towns: Raipur, Jagdalpur, Ambikapur, etc.

Jagdalpur, Ambikapur, Raipur, etc.

Geography: (a) Rivers: Mahanadi, etc.

ratu, Pairi, Hardeo, etc.

Makela Range, etc.

Park: Indravati, etc.

Sarguja, etc.

Sarguja, etc.

Sarguja, etc.

Chhattisgarh

Date of Formation: 1 Nov. 2000 State

Area: 1,36,034 sq km

Capital: Raipur

Neighbouring States: MP, Orissa

Economy: (a) Minerals: Copper, Coal, Iron, Limestone, Manganese and a diamond reserve; (b) Industries: most industries are mineral based like BALCO or Bhilai Steel plant, or forest based; (c) Agricultural Products: Tendu leaves, chironji, harhar, baheda, mahu flowers and sal seeds - predominantly forest products

Transport & Communications: (a) Road Length: 35388.54km NH-1827.30km; SH-3611km (b) Railway Length 1053km; (c) Main Railway Stations: Raipur, Bilaspur, Durg, Korba, Raigarh, and Rajnandgaon; (d) Airports: Raipur, (Airstrips: Bilaspur, Bhilai, Jagdalpur, Ambikapur, Korba, Jashpurnagar and Rajnandgaon)

Education: (a) Schools: 33015; (b) Colleges: 218; (c) Universities: 9

Culture: (a) Festivals: Pola, Nawakhai, Dussehara, Diawali, Holi, Govardhan Puja.

Goa

Date of Formation: 30 May, 1987

Area: 3,702 sq.km

Capital: Panaji

Neighbouring States: Karnataka,

Maharashtra, Arabian Sea

Population: 1,347,668; Male: 687,248, Female: 660,420; Urban Pop: 49.8%; (a) Population Density: 364; (b) Sex Ratio: 960

Literacy: 82.0%; Males: 88.4; Females: 75.4.

No. of Districts: 2

| District | Area (sq km) | Population (2001) | Head-quarters |
|-----------|--------------|-------------------|---------------|
| North Goa | 1,736 | 7,57,407 | Panaji |
| South Goa | 1,966 | 5,86,591 | Margao |

Villages: 359; **Towns:** 44

Governor: SC Jamir

CM: Pratapsingh Raoji Rane

Legislative Bodies: State Legislature: Unicameral-Seats: 40; Lok Sabha Seats: 2, Rajya Sabha: 1.

Main Political Parties: BJP, INC, United Gomantwadi Democratic Party, NCP, Maharashtrabadi Gomantak Party.

Seat of High Court: Bombay.

A bench of Bombay High court is at Panaji. District Court is in South Goa.

Chief Languages: Konkani and Marathi

Major Religions: Hinduism and Christianity

Main Towns: Panaji, Margao, Vasco, Mapusa, Ponda

Geography: (a) Rivers: Mandovi, Zuari, Terekhol, Chapora and Betul; (b) Mountains: Western Ghats; (c) Lake: Mayem; (d) Caves: Khandepur, Arvalem. (e) Wildlife: Dr. Salim Ali Bird Sanctuary, the Bondla Wildlife Sanctuary, Cotigao Wildlife Sanctuary, Molem National Park, Bhagwan Mahavir Wildlife Sanctuary, the Mormugao harbour. (f) Beaches: Bogmalo (water sports), Calangute, Colva, Mandrem, Morjim, Anjuna, Baga, Candolim, Sinquerim, Majorda, Benaulim, Varca, Agonda and Vagator. (g) Waterfalls: The Aravelam waterfalls-adjacent to it is Rudreshwara temple and interesting rock-cut caves, the Mayem lake, the Dudsagar waterfalls-little downward is the Devil's Canyon suitable for trekkers and hikers.

Economy: Paddy is the main agricultural crop, followed by ragi, cashew and coconut. The state has a rich forest cover of more than 1,424 sq.km. Fishing sustains a work force of 40,000 people. (a) Minerals: Iron ore, manganese, ferro-manganese, bauxite, silica sand; (b) Industries: Mining industries, small scale industries like breweries, fruit canning, fish canning, stoves, automobile batteries, printing press, computer peripherals, zip fastener, etc.; (c) Agricultural Products: rice, pulses, ragi, groundnut, maize, jowar, bajra, sugarcane, coconut, cashewnut, arecanut, pineapple, mango, banana.

Transport & Communications: (a) Road Length: National highway-224 km, state highways-232 km, district roads-815 km.; (b)

Railway Length: Goa is linked with Mumbai, Mangalore and Thiruvananthapuram through the Konkan railway; (c) **Main Railway Stations:** Margoa, Canacona, Balli, Verna, Karmali, Thivim, Pernem; (d) **Airports:** Dabolim International (29km from Panaji); (e) **Chief Port:** Mormugao, Dona Paula.

Fort: Tiracol - built by Marathas in 1745, Cabo da Rama-juts into the sea, Cabo-now governor's house, Reis Magos-named after Biblical Magi Kings who is believed to have owned this place and the Aguada Fort- built by Portuguese between 1609-1612 - now used as central prison.

Cuisine: Sweets: Bebinca, Dodol, Sanna, Delicacies: Bangra, pork vindaloo, sorpotel, acuti, chourisso.

Education: (a) Schools: 1537; (b) Colleges: 39; (c) Universities: 1

Culture: (a) Dances: Fugdi, Dhalo (folk); Dekni, Kumbi, Bandhap (women); Mando (love - east-west mix), Ghode Mondri (Ranes victory over Portuguese), Goff & Hanpet Sword (during Shigmo), Dhangar (Navratri), Kala and Dashavtari; (b) Festivals: Carnival, Shigmotsav (Feb/Mar), Sabado Gordo (Feb), Beach Bonanza (Apr), Konkani Drama Fest (Nov/Dec).

Gujarat

Date of Formation: 1 May 1960

Area: 196,024 sq km

Capital: Gandhinagar

Neighbouring States/UT: Rajasthan, Maharashtra, MP, Daman-Diu, Dadra Nager Haveli, Pakistan (country), Arabian Sea.

Population: 50,671,017; Males: 26,385,577; Females: 24,285,440; Urban Population: 37.35%; (a) Population Density: 258; (b) Sex Ratio: 921

6. Literacy 69.1%; Males: 79.7; Females: 57.8.

No. of Districts: 25

| District | Area (sq km) | Population (2001) | Head-quarters |
|---------------|--------------|-------------------|---------------|
| Ahmedabad | 8,087 | 58,08,378 | Ahmedabad |
| Amreli | 7,397 | 13,93,295 | Amreli |
| Anand | 2,941 | 18,56,712 | Anand |
| Banaskantha | 10,757 | 25,02,843 | Palanpur |
| Bharuch | 6,527 | 13,70,104 | Bharuch |
| Bhavnagar | 9,981 | 24,69,264 | Bhavnagar |
| Dahod | 3,646 | 16,35,374 | Dahod |
| Dangs | 1,764 | 1,86,712 | Aliva |
| Gandhinagar | 2,163 | 13,34,731 | Gandhinagar |
| Jamnagar | 14,125 | 18,16,029 | Jamnagar |
| Junagadh | 8,846 | 24,48,427 | Junagadh |
| Khedra | 4,219 | 20,23,354 | Nadad |
| Kutchh | 45,652 | 15,26,321 | Bhuj |
| Mehsana | 4,384 | 18,37,696 | Mehsana |
| Narmada | 2,755 | 5,14,083 | Rajpala |
| Navsari | 2,209 | 12,29,250 | Navsari |
| Panchmahals | 5,220 | 20,24,883 | Godhara |
| Patan | 5,730 | 11,81,941 | Patan |
| Porbandar | 2,298 | 5,36,854 | Porbandar |
| Rajkot | 1,203 | 25,71,931 | Rajkot |
| Sabarkantha | 7,390 | 20,83,416 | Hamatnagar |
| Surat | 7,657 | 49,96,391 | Surat |
| Surendranagar | 10,489 | 15,15,147 | Surendranagar |
| Vadodara | 7,549 | 36,39,775 | Vadodara |
| Valsad | 3,035 | 14,10,680 | Valsad |

Villages: 18,539; **Towns:** 242

Governor: Naval Kishore Sharma

CM: Narendra Modi

Legislative Bodies: State Legislature: Unicameral - Seats: 182; Lok Sabha Seats: 26; Rajya Sabha Seats: 11

Main Political Parties: BJP, INC, JD...

Seat of High Court: Ahmedabad

Chief Languages: Gujarati

Major Religions: Hinduism, Islam

Main Towns: Ahmedabad International, Vadodara, Bhavnagar, Bhuj, Surat, Jamnagar, Kandla, Mehsana, Porbandar, Rajkot.

Geography: (a) Rivers: Sabarmati, Mahi, Narmada, and Tapti. Smaller rivers like Banas, Saraswati and Damanganga; (b) Mountains: Gir Range, Barda Hills, Girnar Hills. (c) National Parks: Gir NP-asiatic lions, Pirotan Marine National Park-known for corals and fish, Wild Ass Sanctuary-Rann of Kutch, Nal Sarovar Bird Sanctuary, Ratanlal

Sloth Bear Sanctuary-Gujarat-MP border, Velavadhar NP, Vansda NP.(d) Beaches: Porbandar, Chorwad, BeytDwaraka, Somnath and Veraval, Mandvi near Delvada.

Economy: (a) Minerals: petroleum oil, natural gas; (b) Industries: Textiles, inorganic chemicals (caustic soda, soda ash), petrochemicals, drugs, oil refinery, pharmaceuticals, cement, electronic and electrical goods, machine tools, sugar, oil, etc.; (c) Agricultural Products: Bajra, jowar, maize, rice, wheat, tobacco, cotton, groundnut, isabgol, sugarcane, mangoes, bananas.

Transport & Communications: (a) Road Length: 74075km.; (b) Main Railway Stations: Ahmedabad, Vadodara, Bharuch, Valsad, Navsar, Surat, Dahod, Nadiad, Bhavnagar, Bhuj, Jamnagar, Rajkot, Mehsana, Himatnagar, Palanpur; (c) Airports: Ahmedabad International, Vadodara, Bhavnagar, Bhuj, Surat, Jamnagar, Kandla, Keshod, Porbandar, Rajkot; (d) Port: Kandla.

Important Shrines: Modhera Sun temple-Mehsana, Hatheesing Jain Temple, Bhadrashwar-Jain pilgrimage, Shamlaji -famous Vaishnava temple, Jama Masjid, Rani Rupmati mosque, Akshardham temple-made of sandstone, Parsees Fire temple-Udwada.

Historic Places: Patan-remains of Solanki dynasty, Lothal and Dholavira-remains of Harrappan civilisation, Adlaj Vav (world's most famous elaborated well)-Gandhinagar, Rani ki Vav-built by Udayamati (queen of Bhimdeva 1 between 1022 and 1063, Uperkot Fort - built by Yadavas.

Shopping: Patola saris, bead-embroidered ghagras, cholis, torans, tondris, chakla, zari, chandrawas, Namdas-felt embroidered with wool, block printed textiles, clay painting, hand painted fabrics.

Education: (a) Schools: 44912; (b) Colleges: 545; (c) Universities: 28.

Culture: (a) Dances: Garba (Lasya Nritya) and , Dandia Ras (Ras Leela, folk), Tippiani (women labourers); (b) Festivals: Janmastami,

-Dwarka and Dakor, Mahavir Jayanti-Palitana, International Kite Festival- Jan, Makar Sankranti, Navratri-Sep/Oct, Tarnetar fair (Aug-Sept), Madhavrai fair - Porbandar (Mar-April), Ambaji fair- Banaskanta dist, Shamlaji fair, Dangi durbar- March, etc.

Haryana

Date of Formation: 1 Nov 1966 State created from part of Punjab

Area: 44,212 sq km

Capital: Chandigarh

Neighbouring States: Punjab, Chandigarh, Himachal Pradesh, Uttaranchal, Uttar Pradesh, Delhi, Rajasthan.

Population: 21,144,564; Males: 11,363,953; Females: 9,780,611; Urban Population: 29%; (a) Population Density: 478; (b) Sex Ratio: 861

Literacy: 67.9%; Males: 78.5; Females: 55.7.

No. of Districts: 20

| District | Area (sq km) | Population (2001) | Head-quarters |
|----------------|--------------|-------------------|---------------|
| Ambala | 1,574 | 10,13,660 | Ambala |
| Bhiwani | 4,778 | 14,24,554 | Bhiwani |
| Faridabad | 2,151 | 21,93,276 | Faridabad |
| Fatehabad | 2,520 | 8,06,158 | Fatehabad |
| Gurgaon | 2,766 | 16,57,669 | Gurgaon |
| Hissar | 3,983 | 15,36,417 | Hissar |
| Jhajjar | 1,834 | 8,87,392 | Jhajjar |
| Jind | 2,702 | 11,89,725 | Jind |
| Kaithal | 2,317 | 9,45,631 | Kaithal |
| Karnal | 2,538 | 12,74,843 | Karnal |
| Kurukshetra | 1,530 | 8,28,120 | Kurukshetra |
| Mahendragarh | 1,859 | 8,12,022 | Narnaul |
| Panchkula | 898 | 4,69,210 | Panchkula |
| Panipat | 1,268 | 9,67,338 | Panipat |
| Rewari | 1,582 | 7,64,727 | Rewari |
| Rohtak | 1,745 | 9,40,036 | Rohtak |
| Sirsa | 4,277 | 11,11,012 | Sirsa |
| Sonapat | 2,122 | 12,78,830 | Sonapat |
| Yamunanagar | 1,768 | 9,82,369 | Yamunanagar |
| Sasatyaevpuram | 2003 | - | Nooh |

Villages: 6,955; **Towns:** 106

Governor: Dr. AR Kidwai

CM: Bhupinder Singh Hooda

Legislative Bodies: State Legislature:

Unicameral - Seats: 90; Lok Sabha Seats: 10; Rajya Sabha Seats: 5

Main Political Parties: INC, Indian National Lok Dal, BJP, BSP, NCP.

Seat of High Court: Chandigarh

Chief Languages: Hindi, Punjabi, Urdu

Major Religions: Hinduism, Islam, Christianity.

Main Towns: Karnal, Rohtak, Panipat, Hisar, Yamunanagar, Kaithal, Gurgaon, Faridabad, Sirsa, Rewar, Bhiwani, Narnaul

Geography: (a) Rivers: Ghaggar, Yamuna; (b) Mountains: Lower Shiwalik Range, Rewari Upland, Delhi Range (c) Lakes: Sirajkhanda, Badkhal, Chakarvati. (d) National Park: Sultanpur Bird Sanctuary.

Economy: (a) Minerals: Limestone, slate, dolomite, china clay, graphite and quartz; (b) Industries: cement, sugar, paper, cotton, textiles, glassware, brassware, cycles, tractors (largest production in the country), motorcycles, timepieces, automobile tyres and tubes, sanitaryware, television sets, steel tubes, hand tools, cotton yarn, refrigerators, vanaspathi, ghee and canvas shoes; (c) Agricultural Products: Rice, wheat, maize, bajra, cotton, sugarcane, barley potato, and pulses.

Transport & Communications: (a) Road Length: 30,468 km; NH 1 - Murthal to Delhi border to Karnal; NH 2 - Ballabgarh to UP border (b) Main Railway Stations: Ambala, Panipat, Kurukshetra and Jakhai. (Jagadhari - railway workshop). (d) Airports: Pinjore, Karnal, Hissar, Bhiwani, Narnaul.

Tourist Destinations: Badkhal Lake-Faridabad, Panipat and Karnal-former site of fierce battles is now famous for furnishing textiles, Kurukshetra Tank, Yadavindra Gardens-Pinjore, Sultanpur Jheel (bird sanctuary).

Education: (a) Schools: 16964; (b) Colleges: 225; (c) Universities: 7

Employment: 5,982,000; Unemployment: 4.77%

Culture: (a) Festivals: Holi, Teej, Diwali, Gugga Pir, Sanjhi, Karca Chauth-for women; Surajkund - famous for popular crafts mela-held in February, Janmashtami Fair-Bhiwani, Masani Fair-Gurgaon; (b) Crafts: Moorah making, khes, druggets, Punja durries.

Himachal Pradesh

Date of Formation: 25 Jan. 1971 State

Area: 55,673 sq km

Capital: Shimla

Neighbouring States: J&K, Punjab, Haryana, Uttaranchal, China (country)

Population: 6,077,900; Males: 3,087,940; Females: 2,989,960; Urban Population: 9.79%; (a) Population Density: 109; (b) Sex Ratio: 970

Literacy: 76.5%; Males: 85.3; Females: 67.4.

No. of Districts: 12

| District | Area (sq km) | Population (2001) | Headquarters |
|----------------|--------------|-------------------|--------------|
| Bilaspur | 1,167 | 3,40,735 | Bilaspur |
| Chamba | 6,528 | 4,60,499 | Chamba |
| Hamirpur | 1,118 | 4,12,009 | Hamirpur |
| Kangra | 5,739 | 13,38,536 | Dharamshala |
| Kinnaur | 6,401 | 83,950 | Reckong Poo |
| Kullu | 5,503 | 3,79,865 | Kullu |
| Lahaul & Spiti | 13,835 | 33,224 | Kaylong |
| Mandi | 3,950 | 9,00,987 | Mandi |
| Shimla | 5,131 | 7,21,745 | Shimla |
| Sirmaur | 2,825 | 4,58,351 | Nahan |
| Solan | 1,936 | 4,99,350 | Solan |
| Una | 1,540 | 4,47,967 | Una |

Villages: 20,118; **Towns:** 57

Governor: Justice Vishnu Sadashiv Kokje

CM: Virbhadra Singh

Legislative Bodies: State Legislature. Unicameral - Seats: 68; Lok Sabha Seats: 4; Rajya Sabha Seats: 3

Main Political Parties: INC, BJP, Himachal Vikas Congress, Lok Jan Shakti Party, Loktantrik Morcha Himachal Pradesh.

Seat of High Court: Shimla

Chief Languages: Hindi, Punjabi, Kinnauri, Pahari

Major Religions: Hinduism, Buddhism, Islam.

Main Towns: Shimla, Mandi, Dharmashala, Kullu, Manali, Bilaspur, Chamba, Khyelang, Kalpa, Kangra

Geography: (a) Rivers: Ravi, Beas, Chenab, Satluj, Yamuna; (b) Mountains: Great Himalaya, Punjab Himalaya, Suket Hills, Shimla Hills, Shiwalik Range, Mussoorie Range, Nag Tibba Range; (c) Lake/ Valley: Kangra Valley, Mahasu Valley, Rampur Valley, Spiti Valley, Lahul Valley, Baspa Valley, Govind Sagar; (d) Pass: Rohtang. (e) Parks and Valleys: Kufri-Himalayan Nature Park, Sangla, (f) Lake: Renuka, Rewalsar - Mandi

Economy: (a) Minerals: Rock salt, slate, gypsum, limestone, barytes, dolomite, pyrites; (b) Industries: IT, Bio-technology, brewery, fruit processing, cement, electronics; (c) Agricultural Products: wheat, maize, rice, barley, vegetable, potato, ginger, soyabean, oilseed, pulses. Fruits: apple, pear, peach, plum, apricot, mango, litchi, guava, strawberry.

Transport & Communications: (a) Road Length: 21,935 km. NH-1235 kms.; (b) Railway Length-two narrow gauge lines (Pathankot to Jogindernagar and Kalka to Shimla) and the broad gauge line from Nangal to Talwara, is under construction; (c) Main Railway Stations: Pathankot, Joginder Nagar; (d) Airports: Bhuntar (Kullu Valley), Jubbarhatti (Shimla) and Gaggal (Kangra). Airstrip: Banikhet (being built).

Shrines: Lakshmi Devi-Manimahesh, Paonta Sahib Gurudwara, Jwalamukhi, Jakhu Hanuman temple-Shimla, Bhimkali temple-Sarahan, Bajreshwari Devi temple-Kangra.

Shopping: Pashmina shawls are very famous, rugs, namdas, gudma, are some of the native attractions. McLeod Ganj- Tibetan textiles, Dalhousie- Kulu shawls and Tibetan handicrafts, Lakkar Bazar,

Education: (a) Schools: 14909; (b) Colleges: 82; (c) Universities: 8

Employment: 2,371,000 (1999-2000)

Culture: (a) Dances: Nati; (b) Festivals: Dussehra of Kulu - begins on Vijay Dashmi; Shivratri of Mand (Feb/Mar); Minjar Fest in Chamba; Lavi Fair at Rampur; Renuka Fair (Aug/Sep); Lohri or Maghi, Lahual and Phulech-festival of flowers (c) Crafts: Pashmina and woollen shawls, namdas, gudma, thobis (floor covering made of goat hair), pullas (straw shoes).

Jammu & Kashmir

Date of Formation: 26 Oct 1947

Area: 2,22,236 sq km

Capital: Srinagar (Summer) Jammu (Winter)

Neighbouring States/countries: Himachal Pradesh, Punjab, (countries - Pakistan, Afghanistan, China.)

Population: 10,143,700; Males: 5,360,926; Females: 4,782,774; Urban Population: 24.88%; (a) Population Density: 100; (b) Sex Ratio: 900

Literacy: 55.5%; Males: 66.6; Females: 43

No. of Districts: 14

| District | Area (sq km) | Population (2001) | Headquarters |
|-----------|--------------|-------------------|--------------|
| Anantnag | 3,984 | 11,70,013 | Anantnag |
| Badgam | 1,371 | 6,32,338 | Badgam |
| Baramulla | 4,588 | 11,66,722 | Baramulla |
| Doda | 11,691 | 6,90,474 | Doda |
| Jammu | 3,097 | 15,71,911 | Jammu |
| Kargil | 14,036 | 1,15,227 | Kargil |
| Kathua | 2,651 | 5,44,206 | Kathua |
| Kupwara | 2,379 | 6,40,013 | Kupwara |
| Ladakh | 82,665* | 1,17,637 | Leh |
| Pulwama | 1,398 | 6,48,762 | Pulwama |
| Poonch | 1,674 | 3,71,561 | Poonch |
| Rajauri | 2,630 | 4,78,595 | Rajauri |
| Srinagar | 2,228 | 11,83,493 | Srinagar |
| Udhampur | 4,550 | 7,38,965 | Udhampur |

* Includes 37,555 sq km under illegal occupation by China.

Villages: 6,652; **Towns:** 75

Governor: Lt Gen. (Retd.) SK Sinha

CM: Ghulam Nabi Azad

Legislative Bodies: State Legislature:

Bicameral Seats: Legislative Assembly: 76 (originally 100 but 24 of which are illegally under POK); Legis Council: 36. Lok Sabha Seats: 6; Rajya Sabha Seats: 4

Main Political Parties: Jammu and Kashmir National Conference; INC, People's Democratic Party, J&K National Panthers Party, CPI-M, J&K Awami League, Democratic Movement, BSP, BJP...

Seat of High Court: Srinagar and Jammu

Chief Languages: Urdu (official), Kashmiri, Dogri, Pahari, Balti, Ladakhi, Purig, Punjabi, Gurji, Dadri

Major Religions: Islam, Hinduism, Buddhism

Main Towns: Srinagar, Jammu, Leh, Anantnag, Baramulla, Pulwama, Punch, Doda, Udhampur

Geography: (a) Rivers: Chenab, Jhelum, Zaskar, Indus, Suru, Nubra and Shyok; (b) Mountains: (divided into 4 regions) Khandi Belt - Greater Himalayas, Great Karakoram, Trans-Himalaya; Siwalik range- Zaskar range, Kunlun; Kashmir Valley - Pirpanjal range; Tibetan tract- Ladakh range; (c) Lakes Wular, Achar, Dal, Pangong, Moriri, and Kar. (Mountain Lakes- Satsar, Vishansar, Kishansar, Gadsar, Gangabal); (d) Pass Zoji La pass; (e) Range Pir Panjal, Great Himalaya, Zaskar, Ladakh, Stok

Ladakh is also called 'Little Tibet' and sometimes 'the last Shangri La.' This region is marked by Buddhist monasteries (gompas), and forts. Hemis Gompa- Leh offers some tough mountain treks to Zaskar valley- Pangong Lake- Tso Moriri Lake. The highest point there is at Zoji La pass.

Economy: (a) Minerals: Mica, fire clay, limestone, kaolin, bauxite; (b) Industries: Handicrafts, carpet, wood carving, shawl-making; (c) Agricultural Products: Paddy, maize, wheat, gram, bajra, jowar, barley, fruits like apple, and walnuts.

Transport & Communications: (a) Road Length 16,117 km.; (b) Main Railway Sta-

tions: Jammu; (Jammu-Udhampur railway line is under construction which will be extended to Srinagar and Baramulla) (c) Airports: Srinagar International, Jammu, Leh.

Shopping: Kashida embroidery, sonzi-fine needle work, and chikendozi-hookwork-jalakdozi-rafookari-Pashmina and kani shawls, silver jewellery, etc.

Education: (a) Schools: 16357; (b) Colleges: 91; (c) Universities: 5

Culture: (a) Dances: Ruf (women-romance and heroic), Kud (Dogra men), Hemis Gumpa; (b) Festivals: Assuj, Lohri, Sinh Sankranti, Bahu Mela in Jammu, Mela Losar, Mela Pat; Id-ul-fitr, Id-ul-Zuha, Id Milad-un-Nabi, Meraj Alam in Kashmir, Muharram, Hemis in Ladakh.

Jharkhand

Date of Formation: 15 Nov 2000 (State created from part of Bihar)

Area: 79,714 sq km

Capital: Ranchi

Neighbouring States: Bihar, UP, Chhattisgarh, Orissa, West Bengal.

Population: 26,945,829; Males: 13,885,037; Females: 13,060,792; Urban Population: 22.25%; (a) Population Density: 338; (b) Sex Ratio: 941

Literacy: 53.6% (Males: 67.3; Females: 38.9)

No. of Districts: 18

| District | Area (sq km) | Population (2001) | Headquarters |
|------------|--------------|-------------------|--------------|
| Bokaro | 2,861 | 14,54,416 | Bokaro |
| Chatra | 3,706 | 6,12,713 | Chatra |
| Deoghar | 2,479 | 9,33,113 | Deoghar |
| Dhanbad | 2,075 | 19,49,526 | Dhanbad |
| Dumka | 3,716 | 9,50,853* | Dumka |
| Gariaha | 4,044 | 8,01,350 | Gariaha |
| Gondia | 4,887 | 14,96,189 | Gondia |
| Godda | 2,110 | 8,61,182 | Godda |
| Gumla | 5,321 | 7,07,555* | Gumla |
| Hazaribagh | 5,965 | 18,36,068 | Hazaribagh |
| Jamtara | 1,802 | 5,44,850* | Jamtara |
| Kodarma | 1,311 | 3,94,703 | Kodarma |
| Latehar | 3660 | 4,67,077* | Latehar |

| | | | |
|-------------------|-------|------------|------------|
| Lohardaga | 1,491 | 2,88,886 | Lohardaga |
| Pakaur | 1,806 | 5,64,253 | Pakaur |
| Palamu | 4,015 | 11,82,770* | Daltonganj |
| Paschim Singhbhum | 5,290 | 10,80,780* | Chabasa |
| Purbi Singhbhum | 3,553 | 16,13,088 | Jamshedpur |
| Ranchi | 7,574 | 22,14,088 | Ranchi |
| Sahebganj | 1,706 | 7,36,835 | Sahebganj |
| Seraikela | 2,725 | 7,07,175* | Seraikela |
| Simdega | 3,756 | 4,46,421* | Simdega |

#Khunti district is under consideration. * Population refers to 1991 census.

Villages: 32,615; **Towns:** 152

Governor: Syed Sibtey Razi

CM: Madhu Koda

Legislative Bodies: State Legislature: Unicameral - Seats: 81; Lok Sabha Seats: 14; Rajya Sabha Seats: 6

Main Political Parties: BJP, INC, NCP, JMM, RJD, JD-United, All India Forward Block, CPI-ML, Jharkhand Students Union, Jharkhand Party...

Seat of High Court: Ranchi

Chief Languages: Hindi, Urdu, Maithili, Bhojpuri

Major Religions: Hinduism, Islam, Buddhism

Main Towns: Ranchi, Jamshedpur, Dhanbad, Daltonganj, Deogarh, Dumka, Hazaribagh, Bokaro, Chaibasa, Chatra, Gumla, Garwa, Giridih

Geography: (a) Rivers: Sankh, South Koel, Damodar, Subarnarekha, Barakat; (b) Mountains: Chotanagpur Plateau, Hazaribagh Plateau, Rajmahal Hills, Parasnath (1366m); (c) Reservoir: Tilaiya, Konar, Govind Ballabh Pant Sagar (d) National Park: Palamau NP, Hazaribagh NP.

Economy: Jharkhand's economy is sustained by mining and heavy industry. It is India's second most important source of coal, mining 26 per cent of the total. In minerals, Jharkhand is probably India's richest state. Jharkhand has rich reserves of iron ore and coal and several industries. The two major steel plants of India are located in Jharkhand: at Jamshedpur and Bokaro. (a) Minerals: iron ore and coal; (b) Industries: Steel, mining,

heavy industries; (c) Agricultural Products: Agriculture is poorly developed. Irrigation is negligible. Drought, therefore, is a periodic threat.

Transport & Communications: (a) Road Length: 4,311km, including 1,500km NH and 2,711km SH; (b) Main Railway Stations: Ranchi, Bokaro, Dhanbad, Jamshedpur, Muri, Deogarh; (c) Airports: Ranchi, Jamshedpur.

Education: (a) Schools: 22821; (b) Colleges: 145; (c) Universities: 7

Culture: (a) Dances: Chhau; (b) Festivals: Chhath, Diwali, Id, Buddha Purnima, Durga Puja. Tribal Festivals: Sarhul, Bandna, Sohrai and Dasai.

Karnataka

Date of Formation: 15 Aug 1947 Mysore state. (1950-56: part (B); 1 Nov 1973 Renamed Karnataka

Area: 1,91,791 sq km

Capital: Bangalore

Neighbouring States: Kerala, Goa, Maharashtra, AP, Tamil Nadu

Population: 52,850,562; Males: 26,898,918; Females: 25,951,644; (a) Population Density: 276; (b) Sex Ratio: 964

Literacy: 66.6%; Males: 76.1; Females: 56.9.

No. of Districts: 27

| District | Area (sq km) | Population (2001) | Head-quarters |
|------------------|--------------|-------------------|---------------|
| Bagalkot | 6,594 | 16,52,232 | Bagalkot |
| Bangalore | 2,190 | 65,23,110 | Bangalore |
| Bangalore Rural | 5,815 | 18,77,416 | Bangalore |
| Belgaum | 13,415 | 42,07,264 | Belgaum |
| Bellary | 8,419 | 20,25,242 | Bellary |
| Bidar | 5,448 | 15,01,374 | Bidar |
| Bijapur | 10,475 | 18,08,863 | Bijapur |
| Chamarajanagar | 5,685 | 9,64,275 | Channarayana |
| Chickmagalur | 7,201 | 11,39,104 | Chickmagalur |
| Chitradurga | 8,388 | 15,10,227 | Chitradurga |
| Dakshina Kannada | 4,843 | 18,96,403 | Mangalore |
| Davanagere | 6,018 | 17,89,693 | Davanagere |
| Dharwad | 4,230 | 16,03,794 | Dharwad |
| Gadag | 4,657 | 9,71,955 | Gadag |
| Gulbarga | 16,224 | 31,24,858 | Gulbarga |

| | | | |
|----------------|--------|-----------|----------|
| Hassan | 6,814 | 17,21,319 | Hassan |
| Haveri | 4,851 | 14,37,860 | Haveri |
| Kodagu | 4,102 | 5,45,322 | Madikeri |
| Kolar | 8,223 | 25,23,406 | Kolar |
| Koppal | 8,458 | 11,93,496 | Koppal |
| Mandya | 4,961 | 17,61,718 | Mandya |
| Mysore | 6,269 | 26,24,911 | Mysore |
| Raichur | 5,559 | 16,48,212 | Raichur |
| Shimoga | 8,465 | 16,39,595 | Shimoga |
| Tumkur | 10,598 | 25,79,516 | Tumkur |
| Udupi | 3,598 | 11,09,494 | U |
| Uttara Kannada | 10,291 | 13,53,299 | Karwar |

Villages: 29,406; **Towns:** 270

Governor: T.N. Chaturvedi

CM: H.D. Kumaraswamy

Legislative Bodies: State Legislature: Bicameral; Legislative Assembly- 224, Legislative Council- 75; Lok Sabha Seats: 28; Rajya Sabha Seats: 12

Main Political Parties: BJP, INC, JD (S), JD (U), CPI-M, Kannada Nadu Paksha, Kannada Chalarali Vatal Paksha

Seat of High Court: Bangalore

Chief Languages: Kannada

Major Religions: Hindu, Islam, Christianity

Main Towns: Bidar, Gulbarga, Bijapur, Belgaum, Dharwad, Raichur, Bellary, Shimoga, Mangalore, Madikeri, Mysore, Bangalore, Kolar, Tumkur, Hassan, Devan-gere.

Geography: (a) Rivers: Krishna, Tungabhadra, Cauvery, Kabani; (b) Mountains: Western Ghats, Chitradurga Hills, Tumkur-Closepet Hills, Mysore Plateau, Biligiri Rangan Hills, Nandi Hills, Gokak Hills, Badami Hills. (c) National Park: Bandipur Wildlife Sanctuary

Economy: (a) Minerals: Gold silver, iron ore, copper, chromite, magnesite, corundum, garnet, limestone; (b) Industries: Aircraft, electronics, software, telecom equipment, alloy steel, machine tools, watches, porcelain, automobiles, etc.; (c) Agricultural Products: Rice, jowar, bajra, ragi, maize, groundnut, sunflower, mulberry, coconut, Potato, grapes, watermelon, etc.

Transport & Communications: (a) Road Length: 1,17,972 km.; NH-3728 km (b) Rail-

way Length: 3100km. The Konkan Railway, the new rail link between Mumbai and Mangalore was dedicated to the nation on May 1, 1998; (c) Main Railway: Stations Bangalore, Mysore, Tumkur, Hosur, Hassan, Mandya, Bellary, Hubli, Bijapur, Gulbarga, Belgaum, Dharwad; (d) Airports: Bangalore, Belgaum, Mangalore, Hubli and Devenhalli (2007); (e) Port: New Mangalore port is the main all-weather seaport.

Adventure Sports: Ramanagaram-rock climbing-50 km from Bangalore, Honnemaradu on Sharavathy-crocodile rafting, canoeing and wind surfing, Cauvery Fishing Camp-82 km from Mysore for anglers, Kudremukh and Kemman Gundi-trekking.

Education: (a) Schools: 59,485; (b) Colleges: 1279; (c) Universities: 20

Employment ('99-00): 20,333,000; Unemployment ('99-00): 4.57%.

Culture: Festivals: Mysore Dussera, Karaga, Ugadi (Kannada New Year), Diwali, Kar Hunnive, Navaratri, Yellu Annavasya, Ramzan.

Kerala

Date of Formation: 1st Nov. 1956

Area: 38,863 sq km

Capital: Thiruvananthapuram

Neighbouring States: Tamil Nadu, Karnataka, Mahe, Lakshdweep Is.

Population: 31,841,374; Males: 15,468,614; Females: 16,372,760; Urban Population: 25.97%; (a) Population Density: 819; (b) Sex Ratio: 1058

Literacy: 90.9%; Males: 94.2; Females: 87.7

No. of Districts: 14

| District | Area (sq km) | Population (2001) | Headquarters |
|-----------|--------------|-------------------|--------------|
| Alappuzha | 1,414 | 1,764,605 | Alappuzha |
| Ernakulam | 2,950 | 2,771,471 | Ernakulam |
| Idukki | 4,476 | 1,145,471 | Idukki |
| Kannur | 2,766 | 1,145,471 | Kannur |

| | | | |
|--------------------|-------|-----------|--------------------|
| Kasargod | 1,992 | 1,085,941 | Kasargod |
| Kollam | 2,491 | 2,137,761 | Kollam |
| Kottayam | 2,208 | 1,795,670 | Kottayam |
| Kozhikode | 2,345 | 2,297,746 | Kozhikode |
| Malappuram | 3,550 | 3,297,512 | Malappuram |
| Palakkad | 4,480 | 2,363,558 | Palakkad |
| Pathanamthitta | 2,637 | 1,110,218 | Pathanamthitta |
| Thiruvananthapuram | 2,192 | 2,237,347 | Thiruvananthapuram |
| Thrissur | 3,032 | 2,434,998 | Thrissur |
| Wyanad | 2,132 | 751,007 | Kalpetta |

Villages: 1,364; **Towns:** 159

Governor: R.L. Bhatia

CM: V.S. Achutanandan

Legislative Bodies: State Legislature:

Unicameral - Seats: 140; Lok Sabha Seats: 20; Rajya Sabha Seats: 9

Main Political Parties: INC, CPI-M, Muslim League Kerala State Committee, Kerala Congress (M), CPI, JD(S), Revolutionary Socialist Party of Kerala, Kerala Congress, Kerala Congress (B), Kerala Congress (J), Democratic Indira Congress, NCP, CMP

Seat of High Court: Kochi

Chief Languages: Malayalam

Major Religions: Hinduism, Islam, Christianity

Main Towns: Thiruvananthapuram, Kochi, Kozhikode, Trissur, Kannur, Kottayam, Kollam, Alapuzha, Palakkad, Malapuram, Pathanamthitta

Geography: (a) Rivers : Periyar-244km, Bharatapuzha, also called Nila-209km; Pamba-176km, Chaliyar-169, Kadaundi & Chalakkudy-130, Achenkovil-128, Kalada & Muvatupuzha-121km.;(Total 44 rivers-out of which 41 are west flowing and 3 eastward - Pambar, Bhawani and Kabani)(b)Mountains: Highest - Anamala (8841 ft), Karinkulam (8455ft), Mukutti (8330ft), Devimala (8273 ft) Highest Peak- Anamudi 2695 msl. (c) Lakes: Vembanad (20S sq km), Kayamakulam (51 sq km), Ashtamudi (50), Anjuthengu (20sq km).Fresh water lake- Shastamcota-3.7 sq km, Vellayni, and Pookat (d) Beaches: Kovalam, Varkala, Vizhinjam, Shankumukham -Trivandrum, Muzhapilan-gad and Payyam-

balam-Kannur, Kappad-Kozhikode. (e) Hill Stations: Munnar, Nelliampathay. (f) Backwaters: Alapuzha, Kollam, Veli, Kochi, Kumarakom-Kottayam. (g) Wildlife: Eravikulam National Park-known for Nilgiri Tahr, Periyar National Park, Param-bikulam National Park, Silent Valley, Peppara National Park.

Economy: (a) Minerals: Ilmenite, Rutile, Kaolin, Limestone; (b) Industries: Coir and cashew are 2 large industries. Handloom and bamboo-based industries are well-developed. Kerala accounts for about 1/3 of India's marine exports. Software development and export is picking up; (c) Agricultural Products: The state has developed commercial agriculture more than food crops. Consequently, the state is short of foodgrains. Kerala accounts for 92% of India's rubber, 70% of coconut, 60% of tapioca and almost 100% of lemon grass oil. Kerala is the single largest producer of a number of other crops like banana and ginger, besides tea and coffee in abundance.

Main Irrigation Projects: Malampuzha, Chalakkudy, Peechi, Pamba, Periyar, Chittoorpuzha, Kuttiyadi, Neyyar, Chimmini

Main Power Projects: Pallivasal Hy., Chenkulam Hy, Peringalkut Hy., Neriyanagalam Hy., Paniyar Hy., Sabarigiri Hy., Sholayar Hy. Brahmapuram Diesel, Kanjikode Wind farm, Kozhikode Diesel, Kayamakulam Thermal Power plant.

Transport & Communications: (a) Road Length: 2,19,805km; (b) Railway Length: 1,148km; (c) Main Railway Stations: Thiruvananthapuram, Kollam, Chengannur, Thiruvalla, Kottayam, Alapuzha, Ernakulam, Trissur, Palakkad, Kozhikode, Kannur, Kasargod; (d) Airports: Thiruvananthapuram, Nedumbassery (Kochi-India's first private airport, was opened in June, '99), and Karipur. Port: Kochi.

Waterfalls: Athirapally, Vazhachal, Palaruvi.

Famous Shrines: Jewish Synagogue

(Mattancherry, Kochi)-St Francis Church - Kochi, Padma-nabhaswamy temple-Trivandrum, Ayyappa temple-Sabarimala, Guruvayoor (Lord Krishna shrine)-Dwarka of the south, Attukal temple- Trivandrum, Methala mosque, Malik Dinar Mosque, St Thomas Memorial Church-Kodungalloor, St Thomas Church- Malayattoor, Mannarasala temple-Harippad, Parumala Church, and Kalady (the birthplace of Sri San-karacharya.

Education: * The first fully literate municipal town (Kottayam-1989), and district (Ernakulam-1990) in India are in Kerala. In 1991, Kerala became the first fully literate state in India. Literacy among adults: 89.9%.

Employment ('99-00):8,902,000; Un-Employment ('99-00):20.97%.

(a) Schools: 12700; (b) Colleges: 313; (c) Universities: 10

Culture: (a) Dances: Kathakali, Mohiniattam, Theyyam, Thullal, Margamkali, Oppana; (b) Festivals: Onam, Vishu, Ramzan, Christmas, Aluva Shivratri.

Madhya Pradesh

Date of Formation: 1 Nov. 1956

Area: 3,08,144 sq km

Capital: Bhopal

Neighbouring States: Maharashtra, Gujarat, Rajasthan, UP, Chhattisgarh

Population: 60,348,023; Males: 31,443,652; Females: 28,904,371; Urban Population: 26.67%; (a) Population Density: 196; (b) Sex Ratio: 920

Literacy: 63.7%; Males: 76.1; Females: 50.3.

No. of Districts: 45

| District | Area (sq km) | Population (2001) | Head-quarters |
|----------|--------------|-------------------|---------------|
| Balaghat | 9,229 | 14,45,760 | Balaghat |
| Barwani | 5,432 | 10,81,039 | Barwani |
| Betul | 10,043 | 13,94,421 | Betul |

| | | | |
|-------------|--------|-----------|-------------|
| Bhind | 4,459 | 14,26,951 | Bhind |
| Bhopal | 2,772 | 18,36,784 | Bhopal |
| Chhatarpur | 8,687 | 14,74,633 | Chhatarpur |
| Chhindwara | 11,815 | 18,48,882 | Chhindwara |
| Damoh | 7,306 | 10,81,909 | Damoh |
| Datta | 2,038 | 6,27,818 | Datta |
| Dewas | 7,020 | 13,06,617 | Dewas |
| Dhaat | 8,153 | 17,40,577 | Dhaat |
| Dindori | 7,427 | 5,79,312 | Dindori |
| East Nimar | 10,779 | 17,08,170 | Khandwa |
| Guna | 11,065 | 16,65,503 | Guna |
| Gwalior | 5,214 | 16,29,881 | Gwalior |
| Indore | 3,898 | 25,85,321 | Indore |
| Harda | 3,339 | 4,74,174 | Harda |
| Hoshangabad | 6,698 | 10,85,011 | Hoshangabad |
| Jabalpur | 5,210 | 21,67,469 | Jabalpur |
| Jhabua | 6,782 | 13,96,677 | Jhabua |
| Katni | 4,947 | 10,63,689 | Katni |
| Mandla | 13,269 | 8,93,908 | Mandla |
| Mandsaur | 9,791 | 11,83,369 | Mandsaur |
| Morena | 11,594 | 15,87,264 | Morena |
| Narsinghpur | 5,133 | 9,57,399 | Narsinghpur |
| Neemuch | 4,267 | 7,25,457 | Neemuch |
| Panna | 7,135 | 8,54,235 | Panna |
| Raisen | 8,466 | 11,20,159 | Raisen |
| Rajgarh | 6,154 | 12,53,246 | Rajgarh |
| Ratlam | 4,861 | 12,14,536 | Ratlam |
| Rewa | 6,134 | 19,72,333 | Rewa |
| Sagar | 10,252 | 20,21,783 | Sagar |
| Satna | 7,502 | 19,68,648 | Satna |
| Sehore | 6,578 | 10,78,769 | Sehore |
| Seoni | 8,758 | 11,65,893 | Seoni |
| Shahdol | 14,028 | 15,72,748 | Shahdol |
| Shajapur | 6,196 | 12,90,230 | Shajapur |
| Sheopur | 6,585 | 5,59,715 | Sheopur |
| Shivpur | 10,278 | 14,40,666 | Shivpur |
| Sidhi | 10,256 | 18,30,160 | Sidhi |
| Tikamgarh | 5,048 | 12,03,533 | Tikamgarh |
| Ujjain | 6,091 | 17,09,885 | Ujjain |
| Umaria | 4,026 | 5,15,851 | Umaria |
| Vidisha | 2,742 | 12,14,759 | Vidisha |
| West Nimar | 13,450 | 15,29,954 | Nurgau |

Villages: 55,393; **Towns:** 394

Governor: Balram Jakhar

CM: Shivraj Singh Chauhan

Legislative Bodies: State Legislature:

Unicameral -Seats: 230; Lok Sabha Seats: 29; Rajya Sabha Seats: 11

Main Political Parties: BJP, INC, Samajwadi Party, BSP, CPI-M, NCP, JD-U.

Seat of High Court: Jabalpur and benches at Gwalior and Indore

Chief Languages: Hindi

Major Religions: Hinduism, Islam, Buddhism

Main Towns: Bhopal, Gwalior, Sagar, Rewa, Jabalpur, Ujjain, Bhind, Ratlam, Seoni, Shajapur, Sagar, Guna, Itarsi, Shivpuri, Morena, Guna, Chindwara, Katni, Mandla, Umaria, Shahdol, Vidhisha.

Geography: (a) Rivers: Narmada, Chambal, Sindh, Betwa, Ken, Son, Tapi; (b) Mountains: Vindhya Range, Satpura Range, Malwa Plateau, Kaimur Hills, Maikala Range, Mahadeo Hills. (c) National Park / Sanctuary: Kanha, Bandhavgarh, Madhav, Karera Bird Sanctuary (Great Indian Bustard), Indravati tiger reserve; Dhuandhar Fall (Bhedaghat) and Marble rock - Jabalpur;

Economy: (a) Minerals: diamond, dolomite, limestone, bauxite, iron-ore, copper, coal, lead, tin, rock phosphate, traditional handicraft and handloom; (b) Industries: Heavy electricals, Govt. Mint, Security Paper mill, sugar mills, refractories, textile machinery, steel casting, electronics, automobiles, optical fibre, newsprint, reolling, industrial gases, synthetics, drugs, engineering tools, chemical fertilisers, solvent extraction; (c) Agricultural Products: Jowar, wheat, rice, gram, oilseeds, pulses, soyabean, cotton, sugarcane.

Transport & Communications: (a) Road Length: 67,600 km. NH 3700 km, SH 7,300km; (b) Main Railway Stations: Bhopal, Bina, Gwalior, Indore, Itarsi, Jabalpur, Katni, Ratlam and Ujjain; (c) Airports: Bhopal, Gwalior, Indore, Khajuraho

Famous Temple towns: Khajuraho, Maheshwar, Omkareshwar, Ujjain, Chitrakoot Orchha, Amarkantak, Bhojpur, Udaypur.

Archeological Sites: Bhimbetka, Satna, Sanchi stupas (Buddhist), Vidisha, Mandsaur,

Education: (a) Schools: 89963; (b) Colleges: 592; (c) Universities: 17

Employment ('99-00): 28,725,000; Unemployment ('99-00): 4.45%.

Culture: (a) Dances: Gaur - bison hunt dance; (b) Festivals: Tan Sen Music Festival-

Gwalior; Ustad Allaaddin Festival -Maihar; Kalidas Samaroh- Ujjain; Festival of Dances- Khajuraho.

Bhagoriya - Jhabua(tribal), Holi, Sravan Somvar, Diwali, Id, Dussehra, Shivratri -Khajuraho, Bhojpur, Pachmarhi, Ujjain; Ramnavami - Chitrakoot, Orcha, Malwa, Pachmarhi.

Maharashtra

Date of Formation: The state of Bombay was bifurcated into Maharashtra and Gujarat on May 1, 1960, Maharashtra retaining the old capital Bombay.

Area: 3,07,713 sq km

Capital: Mumbai

Neighbouring States: Gujarat, Madhya Pradesh, Andhra Pradesh, Karnataka, Goa, Dadra and Nagar Haveli, Chhattisgarh

Population: 96,878,627; Males: 50,400,596; Females: 46,478,031; Urban Population: 42.40%; (a) Population Density: 315; (b) Sex Ratio: 922

Literacy: 76.9%; Males: 86.0; Females: 67.0.

No. of Districts: 35

| District | Area (sq km) | Population (2001) | Headquarters |
|---------------|--------------|-------------------|---------------|
| Ahmednagar | 17,034 | 40,88,077 | Ahmednagar |
| Akola | 5,431 | 16,29,305 | Akola |
| Amaravati | 12,235 | 26,06,063 | Amaravati |
| Aurangabad | 10,106 | 29,20,548 | Aurangabad |
| Beed | 10,692 | 21,59,841 | Beed |
| Bhandara | 3,890 | 11,35,835 | Bhandara |
| Buldana | 9,680 | 22,26,328 | Buldana |
| Chandrapur | 11,417 | 20,77,909 | Chandrapur |
| Dhule | 8,061 | 17,08,993 | Dhule |
| Gadchiroli | 14,477 | 9,69,960 | Gadchiroli |
| Gondia | 5,431 | 12,00,151 | Gondia |
| Mumbai City | 157 | 33,26,837 | Mumbai City |
| Hingoli | 4,526 | 9,86,717 | Hingoli |
| Jalgaon | 11,757 | 36,79,936 | Jalgaon |
| Jalna | 7,715 | 16,12,357 | Jalna |
| Kolhapur | 7,692 | 35,15,413 | Kolhapur |
| Latur | 7,166 | 20,78,237 | Latur |
| Mumbai (Sub.) | 446 | 85,87,561 | Mumbai (Sub.) |
| Nagpur | 9,810 | 40,51,444 | Nagpur |
| Nanded | 10,545 | 28,68,158 | Nanded |
| Nandurbar | 5,035 | 13,09,135 | Nandurbar |

| | | | |
|------------|--------|-----------|------------|
| Nashik | 15,539 | 48,87,923 | Nashik |
| Osmanabad | 7,550 | 14,72,256 | Osmanabad |
| Parbhani | 6,511 | 14,91,109 | Parbhani |
| Pune | 15,637 | 72,24,224 | Pune |
| Raigad | 7,162 | 22,05,972 | Raigad |
| Ratnagiri | 8,196 | 16,96,482 | Ratnagiri |
| Sangli | 8,578 | 25,81,835 | Sangli |
| Satara | 10,475 | 27,96,906 | Satara |
| Sindhudurg | 5,222 | 8,61,672 | Sindhudurg |
| Solapur | 14,886 | 38,55,383 | Solapur |
| Thane | 9,563 | 81,28,833 | Thane |
| Wardha | 6,311 | 12,30,640 | Wardha |
| Washim | 5,150 | 10,19,725 | Washim |
| Yavatmal | 13,594 | 24,60,482 | Yavatmal |

Villages: 43,711; **Towns:** 378

Governor: S.M. Krishna

CM: Vilasrao Deshmukh

Legislative Bodies: State Legislature: Bi-

cameral - Seats: Legislative Council: 78; Legislative Assembly: 288; Lok Sabha Seats: 48; Rajya Sabha Seats: 19

Main Political Parties: NCP, INC, Shiv Sena, BJP, CPI-M, Jan Surajya Sharti, Peasant and Workers Party of India, Akhil Bharatiya Sena,

Seat of High Court: Mumbai (benches at Nagpur, Aurangabad and Panaji)

Chief Languages: Marathi

Major Religions: Hinduism, Islam, Parsi, Christianity, Jainism

Main Towns: Mumbai, Pune, Nagpur, Nashik, Nanded, Nandubur, Akola, Aurangabad, Bid, Gondia, Jalgaon, Jalna, Kolhapur, Kudal, Parbhani, Solapur, Satara, Sangli, Wardha.

Geography: (a) Rivers: Godavari, Penganga, Manjira, Bhima, Varna, Panjhra, Wardha, Wainganga, Purna, Dudhaha, Pravara, Mula, Ghod, Sina, Tirna; (b) Mountains: Ajanta Range, Harishchandra Range, Balaghat Range, Satmala Hills, Gawligarh Hills, Mahabaleshwar, Kalsunai; (c) Lakes: Beale, Tansa, Andhra, Mulshi, Koyna Reservoir. (d) National Park: Nawegaon, Pench Taroba.

Sanctuaries: Nagzira, Tansa, Yawal, Doe, Devlagaon, Devlagaon.

Economy: (a) Minerals: Coal, Iron ore, Manganese, Chromite, Bauxite, Oil & Natural Gas; (b) Industries: Major industries are

chemicals and allied products, textiles, electrical and non-electrical machinery and petroleum and allied products, pharmaceuticals, engineering goods, machine tools, steel and iron castings and plasticware. Santa Cruz Electronics Export Processing Zone (SEEPZ), is a free trade zone for 100 per cent export. India's first gold refinery is at Shirpur. The development of offshore oil fields at Mumbai High and the nearby Bassein North Oil Fields have contributed greatly to the industrial development of the state; (c) Agricultural Products: Main food crops: wheat, rice, jowar, bajra and pulses. Cash crops: cotton, sugarcane, groundnut and tobacco. Alphonso mangoes, Thomson seedless grapes, Cavendish bananas and soft seeded pomegranates are the state's produce.

Transport & Communications: (a) Road Length: 2.66 lakh km. consisting of 3,710 km. of national highways, 33,405 km. of state highways, 47,927 km. of major district roads, and 93,652 km of village roads (as on March 2002); (b) Railway Length: 5,459 km. of railway routes of which about 77.9% is broad gauge, 83% meter gauge and 13.8% is narrow gauge; (c) Main Railway Stations: Bombay is now Mumbai and Victoria Terminus (VT) station Chhatrapati Shivaji Railway Terminus. Bandra, Thane, Vasai, Khurd, Pune, Solapur, Satara, Jalgaon, Bhusaval, Nagpur, Kolhapur, Kudal; (d) Airports: Mumbai. There are four airports under the control of International Airport Authority or Airport Authority of India and 3 under the Ministry of Defence. (e) Ports: Mumbai.

Education: (a) Schools 83552; (b) Colleges: 1733; (c) Universities 52

Employment ('99-00) 34,979,000; Unemployment ('99-00) 7.16%

Famous Forts Pratapgadh, Daulatabad, Shivneri, Vijaydurg, Sindhudurg, Janjira

Culture: (a) Dances: Tamasha, Folk (folk dram) (a), (b) Festivals: Ganesh

(c) Craft: Paithani, Chandrakala, Pasodi, Ghongodi, Dharwadi and brocade sarees, silk-bordered dhoties, himru and bidri work, terracotta pottery, copper and zinc vessels, etc.

Manipur

Date of Formation: 21 Jan 1972 State; 15 Oct., 1949 State (from 1950: Part C); 1 Nov 1956 Union Territory.

Area: 22,327 sq km

Capital: Imphal

Neighbouring States: Mizoram, Assam, Nagaland, Myanmar (country)

Population: 2,166,788; Males: 1,095,634; Females: 1,071,154; Urban Population: 23.88%; (a) Population Density: 111; (b) Sex Ratio: 978

Literacy: 70.5%; Males: 80.3; Females: 60.5.

No. of Districts: 9

| District | Area (sq km) | Population (2001) | Head-quarters |
|---------------|--------------|-------------------|---------------|
| Bishnupur | 496 | 2,05,907 | Bishnupur |
| Chandel | 3,313 | 1,22,714 | Chandel |
| Churachandpur | 4,570 | 2,28,707 | |
| Churachandpur | | | |
| Imphal East | 709 | 3,93,780 | Porompat |
| Imphal West | 519 | 4,39,532 | Lamphelpat |
| Senapati | 3,271 | 3,79,214 | Senapati |
| Tamenglong | 4,391 | 1,11,493 | Tamenglong |
| Thoubal | 514 | 3,66,341 | Thoubal |
| Ukhrul | 4,544 | 1,40,946 | Ukhrul |

Villages: 2,391; **Towns:** 33

Governor: Dr. Shivinder Singh Sidhu

CM: Okram Ibobi Singh

Legislative Bodies: State Legislature: Unicameral- Seats: 60; Lok Sabha Seats: 2; Rajya Sabha Seats: 1

Main Political Parties: INC, Federal Party of Manipur, Manipur State Congress Party, CPI, BJP, NCP, Samata Party, Manipur People's Party, Manipur National Conference, Democratic Revolutionary Peoples Party...

Seat of High Court: A permanent bench of the Guwahati High Court, Imphal Bench (functional since 14-3-1992)

Chief Languages: Manipuri

Major Religions: Hinduism, Christianity.

Main Towns: Imphal, Thoubal, Churachandpur, Ukhrul, Bishnupur, Senapati, Tamenglong, Chandel.

Geography: (a) Rivers: Barak, Manipur; (b) Mountains: West Manipur Hills, Laimatol Range, Letha Range, East Manipur Hills; (d) Lake: Loktak.

Economy: (a) Minerals: Limestone; (b) Industries: Handloom weaving, cottage industries like sericulture, bamboo and cane articles, rice mills, edible oil crushing and leather goods; (c) Agricultural Products: Paddy, wheat, maize.

Transport & Communications: (a) Road Length: 7,599 km NH. 53, 39; (b) Main Railway Stations: Jiribam; (d) Airports: Imphal

Education: (a) Schools: 4033; (b) Colleges: 63; (c) Universities: 2

Culture: Manipuri dancing is one of the classical dances of India. Male dancers perform acrobatics and the graceful movements of female dancers are delightful.

(a) Dances: Manipuri; (b) Festivals: Dol Jatra, Lai Haraoba, Rasa Leela, Chei-raoba, Ningol Chakouba, Imoinu Irtapa, Gaan-Nagai, Lui-Nagai-ni, Yaoshang (Holi), Mera Houcho-ngba, Kut, Id-ul-Fitr, Christmas.

(c) The favourite sport is polo and Manipur claims to have invented it. Polo is also popular in few other places in Asia.

Meghalaya

Date of Formation: 2 Apr 1970 State within Assam; 21 Jan 1972 Separate state

Area: 22,429 sq km

Capital: Shillong

Neighbouring States: Assam, Bangladesh (country)

Population: 2,318,822; Males: 1,176,087; Females: 1,142,735; Urban Population: 19.63%; (a) Population Density: 103; (b) Sex Ratio: 975

Literacy: 62.6%; Males: 65.4; Females: 59.6.

No. of Districts: 7

| District | Area (sq km) | Population (2001) | Headquarters |
|--------------------|--------------|-------------------|--------------|
| East Garo Hills | 2,603 | 2,47,555 | Williamnagar |
| East Khasi Hills | 2,748 | 6,60,994 | Shillong |
| Jaintia Hills | 3,819 | 2,95,692 | Jowai |
| Ri-Bhoi * | 2,448 | 1,92,795 | Nongpoh |
| South Garo Hills * | 1,887 | 99,105 | Baghmara |
| West Garo Hills | 3,677 | 5,15,813 | Tura |
| West Khasi Hills | 5,247 | 2,94,115 | Nongstoin |

* created in June 1992.

Villages: 6,026; **Towns:** 16

Governor: M.M. Jacob

CM: J.D. Rymbai

Legislative Bodies: State Legislature:

Unicameral -Seats: 60; Lok Sabha Seats: 2; Rajya Sabha Seats: 1

Main Political Parties: INC, NCP, United Democratic Party, Meghalaya Democratic Party, BJP, Hill State People's Democratic Party, Khun, Hynentrip National Awakening Movement...

Seat of High Court: Guwahati. A High Court Bench is located at Shillong.

Chief Languages: Khasi, Garo and English.

Major Religions: Hinduism, Christianity

Main Towns: Shillong, Tura, Williamnagar, Nongpoh, Nongstoin, Jowai, Baghmara, Mawphlang

Geography: (a) Rivers: Simsang, Manda, Daming, Ringge, Gamol, Bugi, (Khri, Krishnai, Kapili, Sareswari, Bhogai); (b) Mountains: Garo Hills, Khasi Hills, Jaintia Hills; Nokrek Peak.

Economy: (a) Minerals: Sillimanite, Coal, limestone, dolomite, fireclay, felspar, quartz, glass sand, sandstone; (b) Industries: Cement: Industrial units are fast coming up. There is a public sector cement factory at Cherrapunjee. Meghalaya's hydro-electric and thermal power potential has been estimated at about 2500 and 1000 megawatts respectively; (c) Agricultural Products: Rice

and Maize are the major food crops. Potato, tezpata, sugarcane, oilseeds, cotton, jute, mesta, arecanut besides fruits like pineapple, orange, and bananas are the important products. 'Khasi Mandarin' oranges are famous. Area under forest is 950,000 hectares.

Transport & Communications: (a) Road Length: 7,860 km of both surfaced and unsurfaced roads; (b) Railway: None; (c) Airports: Umroi, 35km from Shillong

Some of the important Places of interest are: Ward's Lake, Lady Hydary Park, Bishop Beadon Falls, Elephant Falls, Uniam Lake, Kyllang Rock, Nohsngithiang falls at Mawmsai, and the monoliths of Nartiang.

Education: (a) Schools: 7531; (b) Colleges: 46; (c) Universities: 1

Culture: (a) Dances: Nongkrem at Smit village; Laho (Jaintias); (b) Festivals: Shad Suk Mynsiem - April 2nd week (Khasis); Wangala Oct-Nov (Garos); Behdienkhlam at Jowai - July (Jaintias).

Mizoram

Date of Formation: 20 Feb 1987

Area: 21,081 sq km

Capital: Aizawl

Neighbouring States: Tripura, Assam, Manipur, Myanmar (country)

Population: 888,573; Males: 459,109; Females: 429,464; Urban Population: 49.50%; (a) Population Density: 42; (b) Sex Ratio: 938

Literacy: 88.8%; Males: 90.7; Females: 86.7

No. of Districts: 8

| District | Area (sq km) | Population (2001) | Headquarters |
|----------|--------------|-------------------|--------------|
| Aizawl | 3,576 | 3,32,812 | Aizawl |
| Champhai | 3,186 | 1,01,387 | Champhai |
| Kolasib | 1,283 | 60,977 | Kolasib |
| Lunglei | 2,557 | 73,050 | Lunglei |
| Lunglei | 4,533 | 1,37,155 | Lunglei |
| Mamit | 3,026 | 62,1 | Mamit |

| | | | |
|--------------|-------|--------|----------|
| Chhimtuiipui | 1,400 | 60,823 | Saiha |
| Serchhip | 1,422 | 55,539 | Serchhip |

Villages: 817; **Towns:** 22

Governor: Lt. Gen. (Retd.) M.M. Lakhera

CM: Zoramthanga

Legislative Bodies: State Legislature:

Unicameral -Seats: 40 members; Lok Sabha

Seats: 1; Rajya Sabha Seats: 1

Main Political Parties: Mizo National Front, INC, Mizoram People's Conference, Zoram Nationalist Party, Hmar Peoples Convention, Maraland Democratic Front...

Seat of High Court: Guwahati. A bench at Aizawl.

Chief Languages: Mizo and English

Major Religions: Christianity

Main Towns: Aizawl, Mamit, Lunglei, Lawngtlai, Saiha, Champhai

Geography: (a) Rivers: Tlawng (or the Dhaleswari), the Sonai and the Tuivawl; (b) Mountains: Mizoram is a land of hills, the highest point being the Blue Mountain (2165 metres).

Economy: (a) Industries: Handloom, rice mills, flour mills, brick making, bamboo handicrafts, sericulture, electronics; (b) Agricultural Products: Maize and paddy. Pulses, sugarcane, chilly, ginger, turmeric, potato, tobacco, vegetables, banana and pineapple are the other important crops.

Transport & Communications: (a) Road Length: 4001.53 km; (b) Main Railway Stations: Bairabi; (c) Airports: Aizawl, Lunglei

Places of Interest: Tam Dil - natural Lake, Vantawng Falls, Zotlang, Lunglei. Thenzawl hill station, Champhai resort, and Saitual resort, Dingdi Art gallery.

Education: (a) Schools: 2489; (b) Colleges: 29; (c) Universities: 1

Culture: (a) Dances: Bamboo dances, Khantum Solokia, Kuallam, Cheraw Kan, Chheiraw and lam. Chheihlam (recounts heroes around rice beer) and Khuallam (a dance of guests); (b) Festivals: Chapchar Kut, Mim Kut (maize fest-Aug-Sept), Pawl Kut (harvest-

Dec-Jan), Christmas, Easter; (c) Crafts: Puan woven on traditional looms, thi-hi (amber bead necklace), Dar-hi (glass bead necklace), shawls, cane and bamboo work, Lunglei, Chintapai, Vakiria (headgear).

Nagaland

Date of Formation: 1st Dec. 1963

Area: 16,579 sq km

Capital: Kohima

Neighbouring States: Manipur, Arunachal Pradesh, Assam, Myanmar (country).

Population: 1,990,036; Males: 1,047,141; Females: 942,895; Urban Population: 17.74%; (a) Population Density: 120; (b) Sex Ratio: 909

Literacy: 66.6%; Males: 71.2; Females: 61.5.

No. of Districts: 8

| District | Area (sq km) | Population (2001) | Head-quarters |
|------------|--------------|-------------------|---------------|
| Dimapur | 927 | 3,08,382 | Dimapur |
| Kohima | 3,144 | 3,14,366 | Kohima |
| Phek | 2,026 | 1,48,246 | Phek |
| Mokokchung | 1,615 | 2,27,320 | Mokokchung |
| Mon | 1,876 | 2,59,604 | Mon |
| Tuensang | 4,228 | 4,14,801 | Tuensang |
| Wokha | 1,628 | 1,61,098 | Wokha |
| Zunheboto | 1,255 | 1,54,909 | Zunheboto |

Villages: 1,317; **Towns:** 9

Governor: Shyamal Dutta

CM: Neiphiu Rio

Legislative Bodies: State Legislature: Unicameral -Seats: 60; Lok Sabha Seats: 1; Rajya Sabha Seats: 1

Main Political Parties: INC, Nagaland Peoples Front, BJP, Nationalist Democratic Movement, JD-U, Samta Party, ...

Seat of High Court: Guwahati High Court. A bench is located at Kohima.

Chief Languages: Angami, Ao, Chang, Konyak, Lotha, Sangtam, Sema and Chakhesang

Major Religions: Hinduism, Christianity

Main Towns: Kohima, Phek, Mon, Wokha,

Mokokchung, Tuensang, Zunheboto

Geography: (a) Rivers: Dhansiri, Doyang, Dikhu and Jhanji; (b) Mountains: Saramati, the highest peak, is 3841 m high (c) National Park Intangki, known for the Blythe Tragopan, very colourful cock, found only at Phek.

Economy: (a) Minerals: Nagaland's mineral wealth (coal, limestone, iron, nickel, cobalt, chromium and marble) is immense, though unexplored yet; (b) Industries: Nagas make beautiful decorative materials. Nagaland has achieved remarkable progress in small and medium industries. Today the state has 30 industrial units, and over 300 small-scale industries. The Nagaland Sugar Mill at Dimapur has an installed capacity of 1,000 tonnes per day; (c) Agricultural Products: Rice, vegetable.

Transport & Communications: (a) Road Length: 9,860 km; (b) Main Railway Stations: Dimapur; (c) Airports: Dimapur

Education: (a) Schools: 2058; (b) Colleges: 37; (c) Universities: 1

Culture: (a) Dances: Naga dance and music are intrinsic part of Naga life mostly eulogising bravery, beauty, love and generosity; (b) Festivals: Hornbill festival (1st week of Dec); Sekrenyi of Angamis (Touphema-Kohima, Feb 26-27); Monyu (Pongo-Longleng, Apr 1-3); Moatsu (Chuchuyi-miang-Mokokchung, May 1-3); Tokhu Emong, Tuluni - of Semas and Christmas. Aoling festival of Konyaks, Pikhuchak festival of Lothas in Wokha; (c) Crafts: wood carving, hand woven shawl, baskets like Akhi, Akha, Chakhe-sang, Angami jewellery.

Capital: Bhubaneswar

Neighbouring States: Andhra Pradesh, Chhattisgarh, Jharkhand, West Bengal, Bay of Bengal (sea)

Population: 36,804,660; Males: 18,660,570; Females: 18,144,090; Urban Population: 14.97%; (a) Population Density: 236; (b) Sex Ratio: 972

Literacy: 63.1%; Males: 75.3; Females: 50.5.

No. of Districts: 30

| District | Area (sq km) | Population (2001) | Head-quarters |
|----------------|--------------|-------------------|---------------|
| Angul | 6,347 | 11,39,341 | Angul |
| Balangir | 6,552 | 13,35,760 | Balangir |
| Balasore | 3,706 | 20,23,056 | Balasore |
| Bargarh | 5,832 | 13,45,601 | Bargarh |
| Bhadrak | 2,788 | 13,32,249 | Bhadrak |
| Boudh | 4,289 | 3,73,038 | Boudh |
| Cuttack | 3,915 | 23,40,686 | Cuttack |
| Deogarh | 2,781 | 2,74,095 | Deogarh |
| Dhenkanal | 4,597 | 10,65,983 | Dhenkanal |
| Gajapati | 3,056 | 5,18,448 | |
| Paralakhemundi | | | |
| Ganjam | 8,033 | 31,36,937 | Chhatrapur |
| Jagatsinghpur | 1,759 | 10,56,556 | Jagatsinghpur |
| Jajpur | 2,885 | 16,22,868 | Panikoli |
| Jharsuguda | 2,202 | 5,09,056 | Jharsuguda |
| Kalahandi | 8,197 | 13,34,372 | Bhavanipatna |
| Kandhamal | 6,004 | 6,47,912 | Phulbani |
| Kendrapara | 2,546 | 13,01,856 | Kendrapara |
| Keonjhar | 8,336 | 15,61,521 | Keonjhar |
| Khurda | 2,888 | 18,74,405 | Khurda |
| Koraput | 8,534 | 11,77,954 | Koraput |
| Malkangiri | 6,115 | 4,80,232 | Malkangiri |
| Majurbhanj | 10,410 | 22,21,782 | Bargarh |
| Nabarangpur | 3,135 | 10,18,171 | Nabarangpur |
| Nayagarh | 3,954 | 8,63,934 | Nayagarh |
| Nawapara | 3,408 | 5,30,524 | Nawapara |
| Puri | 3,055 | 14,98,604 | Puri |
| Rayagada | 2,585 | 8,23,019 | Rayagada |
| Sambalpur | 4,712 | 9,28,839 | Sambalpur |
| Sonepur | 2,284 | 5,40,659 | Sonepur |
| Sundargarh | 4,442 | 18,29,412 | Sundargarh |

Villages: 51,349 **Towns:** 133

Governor: Rameshwar Tripathi

CM: Naveen Pattnaik

Legislative Bodies: 200

Administration: Unclassified

Seats: 21 **Party Seats:** 11

Main Political Parties:

Orissa

Date of Formation: 15 Aug 1947 Province

Area: 155,707 sq km

Dal, INC, BJP, Jharkhand Mukti Morcha, Orissa Gana Parishad, CPI, CPI-M

Seat of High Court: Cuttack

Chief Languages: Oriya

Major Religions: Hinduism, Jainism, Islam

Main Towns: Bhubaneswar, Cuttack, Chhatrapur, Puri, Sambalpur, Balangir, Jharsuguda, Baragarh, Bhawanipatna, Koraput, Rourkela, Baleswar, Bhadrak, Nabrangpur, Rayagada, Berhampur, Balangir, Phulbani, Dhenkanal, Kendrapara

Geography: (a) Rivers: Mahanadi, Brahmani, Baitarani, Tel, Pushikulya, Sabani; (b) Mountains: Garhjat Hills, Mahendra Giri; (d) Lake/Reservoir: Hirakud, Balimela, Chilka (The biggest and the most famous lake in Orissa is the Chilka lake. It is 64 km long and 16 to 20 km wide. There are two beautiful islands in the lake namely Parikud and Malud). Hirakud Dam, the fourth largest in the world, on Mahanadi is another attraction. Chilka, the largest brackish water inland lake in Asia, stretches over an area of 1100 sq.km. (d) National Parks: The largest Lion Safari of India, and the only White Tiger Safari in the world, are located on the outskirts of Bhubaneswar.

Economy: (a) Minerals: Chromite, bauxite, dolomite, graphite, iron-ore, coal, copper, kaolin, lead, quartzite, steatite and tin; (b) Industries: The Central Sector Projects are: Steel Plant at Rourkela, SAND Complex at Chhatrapur, Heavy Water Project at Talcher, Coach Repairing Workshop at Mancheswar, Aluminium Complex at Koraput, Captive Power plant at Angul, Aluminium Smelter at Angul and Fertilizer Plant at Paradeep. Major thermal and hydel power stations are Talcher, Hirakud and Chiplima. Other power projects are Upper Indravati, Upper Kolab, Rengali and Ib. Centre has cleared a 10,000 MW power project at Hirma, Orissa to be commissioned by 2008; (c) Agricultural Products: 64% of the working population is dependent

on agriculture. Rice, pulses, oil-seeds, jute, mesta, sugarcane (the main cash crop), coconut and turmeric are important crops. The state contributes one-tenth of the rice production in India.

Transport & Communications: (a) Road Length: 3194km NH; 30 km state express highways; 5014 km SH; (b) Railway Length in 2003 was 2,311 km - broad-gauge and 90 km narrow-gauge lines; (c) Main Rail-way Stations: Bhubaneswar, Puri, Cuttack, Brahmapur, Balangir, Raurkela, Sambalpur; (d) Airports: Bhubaneswar. There are 13 airstrips and 16 helipads in the state; (e) Ports: Paradeep (major) and Gopalpur (all-weather)

Education: (a) Schools: 55583; (b) Colleges: 618; (c) Universities: 9

Employment ('99-00): 11,928,000; Un-Employment ('99-00): 7.34%.

Culture: (a) Dances: Odissi, the dance form of Orissa, evolved in the shadow of the magnificent temples of the state. Dalkhai (tribal dance), Ghoomra, Ranapa and Chhachhaya (folk dance); (b) Festivals: Rath Yatra (Puri), Shrabana Purnima, Ashokastami, Chandan Yatra, Snana Yatra and Konark festival; (c) Handloom products of silk and tussar, silver filigree work (tarkashi), Pat chitra paintings, golden glass work.

Punjab

Date of Formation: 15 Aug 1947 Province; 26 Jan 1950 State (until 1956: part (A)

Area: 50,362 sq km

Capital: Chandigarh

Neighbouring States: Jammu & Kashmir, Himachal Pradesh, Haryana, Rajasthan, Pakistan (country)

Population: 24,358,999; Males: 12,985,045; Females: 11,373,954; Urban Population: 33.95%; (a) Population Density: 484; (b) Sex Ratio: 874

Literacy: 69.7%; Males: 75.2; Females: 63.4.

No. of Districts: 17

| District | Area
(sq km) | Population
(2001) | Head-
quarters |
|-----------------|-----------------|----------------------|-------------------|
| Amritsar | 5,075 | 30,74,207 | Amritsar |
| Bhathinda | 3,377 | 11,81,236 | Bhathinda |
| Faridkot | 1,472 | 5,52,466 | Faridkot |
| Fatehgarh Sahib | 1,180 | 5,39,751 | Fatehgarh Sahib |
| Ferozepur | 5,865 | 17,44,753 | Ferozepur |
| Gurdaspur | 3,570 | 20,96,889 | Gurdaspur |
| Hoshiarpur | 3,310 | 14,78,045 | Hoshiarpur |
| Jalandhar | 2,658 | 19,53,508 | Jalandhar |
| Kapurthala | 1,646 | 7,52,287 | Kapurthala |
| Ludhiana | 3,744 | 30,30,352 | Ludhiana |
| Mansa | 2,174 | 6,88,630 | Mansa |
| Moga | 1,672 | 8,86,313 | Moga |
| Muktsar | 2,596 | 7,76,702 | Muktsar |
| Nawan Shehar | 1,258 | 5,86,637 | Nawan Shehar |
| Patiala | 3,627 | 18,39,056 | Patiala |
| Rupnagar | 2,117 | 11,10,000 | Rupnagar |
| Sangrur | 5,021 | 19,98,464 | Sangrur |

Villages: 12,673; **Towns:** 157

Governor: Gen. (Retd.) SF Rodrigues

CM: Capt. Amarinder Singh

Legislative Bodies: Legislature Unicameral

- Seats: 117; Lok Sabha Seats: 13; Rajya Sabha Seats: 7

Main Political Parties: INC, Shiromani Akali Dal (Badal), BJP, CPI...

Seat of High Court: Chandigarh

Chief Languages: Punjabi

Major Religions: Sikh, Hinduism, Christianity

Main Towns: Ludhiana, Amritsar, Bathinda, Jalandhar, Patiala, Moga, Ambala, Gurdaspur

Geography: (a) Rivers: Beas, Sutluj, Ravi; (b) Mountains: Katar Dhar (Shivalik Range), Hoshiarpur Choaland, Chandigarh Choaland; (c) Plain Malwa, Sirhind, Manjha.

Economy: (a) Industries: The chief manufactures are textiles, sewing machines, sports goods, sugar, starch, fertilizers, bicycles, scientific instruments, electrical goods, machine tools and pine oil. A Science City is being set up at Jalandhar; (b) Agricultural Products: Wheat,

rice, maize, bajra, jowar, barley, oilseeds, sugarcane, potato, cotton, pulses, tobacco.

Transport & Communications: (a) Road Length: 48,543 km; (b) Railway Length: 3726.06 km; (c) Main Railway Stations: Ambala, Patiala, Jalandhar, Amritsar, Bhatinda; (d) Airports: An international airport at Rajasansi (Amritsar), Chandigarh, Bathinda, and Ludhiana.

Education: (a) Schools: 20037; (b) Colleges: 293; (c) Universities: 8

Employment ('99-00): 8,013,000; Unemployment ('99-00): 4.03%.

Culture: (a) Dances: Bhangra, Gidda and Thumar, (b) Festivals: Gurdurab, Lohri, Dussehra, Diwali, Holi, Holi Mohalla (Anandpur Sahib), Rauza Sharif Urs (Sirhind), Baisakhi (Talwandi Saboo), Chappar Mela, Sheikh Farid Agam Purb (Faridkot), Shaheedi Jor Mela (Sirhind), Harballah Sangeet Sammelan (Jalandhar); (c) Crafts: Pulkari embroidery on bed sheets, durries, shawls, jerseys.

Rajasthan

Date of Formation: 1 Nov 1956 Rajasthan (- full statehood); 25 Mar 1948 Rajasthan Union; 18 Apr 1948 United states of Rajasthan; 30 Apr 1949 United states of Greater Rajasthan (from 1950: Part (B))

Area: 3,42,239 sq km

Capital: Jaipur

Neighbouring States: Gujarat, Madhya Pradesh, Haryana, Punjab, Pakistan, Uttar Pradesh, Delhi, Haryana, Punjab, Pakistan, Gujarat

Population: 56,507,185 (2001) Males: 27,587,777; Females: 28,919,408; Population: 23.38% of India; (a) Population Density: 165; (b) Sex Ratio: 922

Literacy: 60.4% Males: 77.7% Females: 43.9.

No. of Districts: 32

| District | Area
(sq km) | Population
(2001) | Head-
quarters |
|----------|-----------------|----------------------|-------------------|
| Alwar | 8,449 | 27,50,526 | Alwar |
| Banswara | 8,387 | 29,50,862 | Banswara |

| | | | |
|-------------|--------|-----------|-------------|
| 8answara | 5,037 | 15,00,420 | 8answara |
| 8aran | 6,955 | 10,22,568 | 8aran |
| 8armer | 28,387 | 19,63,758 | 8armer |
| 8haratpur | 5,066 | 20,98,323 | 8haratpur |
| 8hilwara | 10,455 | 20,09,516 | 8hilwara |
| 8ikaner | 27,244 | 16,73,562 | 8ikaner |
| Bundi | 5,550 | 9,61,269 | Bundi |
| Chittorgarh | 10,856 | 18,02,656 | Chittorgarh |
| Churu | 16,830 | 19,22,908 | Churu |
| Dausa | 2,950 | 13,16,790 | Dausa |
| Dholpur | 3,034 | 9,82,815 | Dholpur |
| Dungarpur | 3,770 | 11,07,037 | Dungarpur |
| Ganganagar | 7,944 | 17,88,487 | Ganganagar |
| Hanumangarh | 12,690 | 15,17,390 | Hanumangarh |
| Jaipur | 11,588 | 52,52,388 | Jaipur |
| Jaisalmer | 38,401 | 5,07,999 | Jaisalmer |
| Jalore | 10,640 | 14,48,486 | Jalore |
| Jhalawar | 6,219 | 11,80,342 | Jhalawar |
| Jhunjhunu | 5,928 | 19,13,099 | Jhunjhunu |
| Jodhpur | 22,850 | 28,80,777 | Jodhpur |
| Karoli | 5,014 | 12,05,631 | Karoli |
| Kota | 5,481 | 15,68,580 | Kota |
| Nagaur | 17,718 | 27,73,894 | Nagaur |
| Pali | 12,387 | 18,19,201 | Pali |
| Rajsamand | 4,768 | 9,86,269 | Rajsamand |
| S. Madhopur | 5,043 | 11,16,031 | S. Madhopur |
| Sikar | 7,732 | 22,87,229 | Sikar |
| Sirohi | 5,136 | 8,50,756 | Sirohi |
| Tonk | 7,194 | 12,11,343 | Tonk |
| Udaipur | 12,511 | 26,32,210 | Udaipur |

Villages:: 41,353; **Towns:** 222

Governor: Smt. Pratibha Patil

CM: Smt. Vasundhara Raje

Legislative Bodies: State Legislature: Unicameral -200; Lok Sabha Seats: 25; Rajya Sabha Seats: 10

Main Political Parties: BJP, INC, Indian National Lok Dal, BSP, JD-U, CPI-M, Lok Jan Shakti Party, Rajasthan Samajik Nyaya Manch...

Seat of High Court: Jodhpur and a bench at Jaipur.

Chief Languages: Rajasthani, Hindi

Major Religions: Hinduism, Jainism, Islam

Main Towns: Jaipur, Kota, Tonk, Jodhpur, Bikaner, Gandhinagar, Pali, Nagaur, Udai-pur, Bhilwara, Sikar, Alwar, Sawai Madhopur, Baran, Ajmer, Chittorgarh

Geography:(a) Desert: Great Indian

Desert (The Thar); (b) Rivers: Luni, Banas, Kali Sindh, Chambal, Indira Gandhi Nahar (Canal); (c) Mountains: Aravalli Range (Guru Shikhar Peak, 1722m), Alwar Hills, Sojat Hills, Mewar Hills, Mukandwara; (d) Lakes/Reservoirs Sambhar Salt Lake, Gudha, Rana Pratap Sagar, Gandhi Sagar, Dhebar Lake, Mandor (e) Wildlife Sariska Tiger Park-Alwar, Keoladeo Ghana National Park.

Economy: (a) Minerals: zinc concentrates, emerald, garnet, gypsum, silver ore, asbestos, felspar, mica, rock phosphate, marble and red stone; (b) Industries: Textiles, rug-ged and woollen goods, sugar, cement, glass, sodium, oxygen and acetylene units, pesticides, insecticides and dyes are some of the major industries. Other enterprises include the manufacture of caustic soda, calcium carbide and ny-lon tyre cord and copper smelting. Marble work, woollen carpets, jewellery, embroidery, articles of leather, pottery and brass embossing. Rajasthan handicrafts are famous all over the world; (c) Agricultural Products: The principal crops are jowar, bajra, maize, wheat, grams, oil-seeds, cotton, sugarcane and tobacco.

Transport & Communications: (a) Road Length: 1,53,734 km; (b) Railway Length 6228 km; (c) Main Railway Stations: Jaipur, Jodhpur, Marwar, Kota, Alwar, Sawai Madho-pur; (d) Airports: Jaipur, Jodhpur

Education: (a) Schools: 64665; (b) Colleges: 410; (c) Universities: 15

Employment ('99-00): 19,930,000; Un-Employment ('99-00): 3.13%.

Culture: (a) Dances: Khayal (dance-music), Ghumar during Teej and Gangaur festivals, Panihari, Chari, Kachchi Ghor; (b) Festivals: Deepawali, Vijayadashami, Holi, Teej, Gan-gaur (Jaipur), Urs of Ajmer Sherif and Galia-kot, Christmas; (c) Fairs: tribal Kumbh of Bene-shwar (Dungarpur), Ramdeora (Jaisalmer), Mahavir fair at Shri Mahavirji in Sawai Madho-pur, Janbeshwari Fair (Mukam-Bikaner), Kartik Poomima and Cattle Fair

(Pushkar-Ajmer) and Shyamji Fair (Sikar); (d) Craft: Bandhini (tie and dye) work, block printing, hand-knotted woollen carpets, massonai work, gharas kagzi pottery, pichwais (painting on cloth), phads (cloth scroll painting), lacquer-works.

Sikkim

Date of Formation: 16 May 1975 State

Area: 7,096 sq km

Capital: Gangtok

Neighbouring States: West Bengal, China-Nepal-Bhutan (countries)

Population: 540,851; Males: 288,484; Females: 252,367; Urban Population: 11.10%; (a) Population Density: 76; (b) Sex Ratio: 875

Literacy: 68.8%; Males: 76.0; Females: 60.4.

No. of Districts: 4

| District | Area
(sq km) | Population
(2001) | Head-
quarters |
|----------|-----------------|----------------------|-------------------|
| East | 954 | 1,78,452 | Gangtok |
| North | 4,226 | 31,240 | Mangan |
| South | 750 | 98,604 | Namchi |
| West | 1,166 | 98,161 | Gyalshing |

Villages: 452; **Towns:** 9

Governor: V. Rama Rao

CM: Pawan Chamling

Legislative Bodies: State Legislature: Unicameral -Seats: 32; Lok Sabha Seats: 1; Rajya Sabha Seats: 1

Main Political Parties: Sikkim Democratic Front, INC.

Seat of High Court: Gangtok

Chief Languages: Lepcha, Bhutia, Hindi, Nepali and Limbu

Major Religions: Buddhism, Hinduism.

Main Towns: Gangtok, Namchi, Gyalshing, Mangan, Jelep La, Pemayangtse, Lachen, Yunthang

Geography: (a) Rivers: Teesta, Rangit; (b) Mountains: Kanchenjunga-the highest peak in India is situated here. (c) Khangchendzonga National Park is one of the

highest national parks in the world and includes the world's third highest mountain (Kanchenjunga). Deorali is another National Park. The yak and the musk deer are animals found in Sikkim. There are over 4000 species of plants.

Economy: (a) Minerals: Gold, silver, copper, zinc; (b) Industries: There are units engaged in food processing, tanning, watch assembling and distilleries, breweries and flour mills; (c) Agricultural Products: The principal crops are maize, paddy, millet, wheat and barley. Orange, potatoes, apples and cardamom are also produced. Sikkim has the largest area and the highest production of large cardamom in India. Tea is grown in Sikkim.

Sikkim is very rich in varieties of orchids.

Transport & Communications: (a) Road Length: 2383 km; (b) Main Railway Stations: No stations but the closest ones are Siliguri (114 km) and Jalpaiguri (125 km); (c) Airports: Gangtok.

Education: (a) Schools: 764; (b) Colleges: 5; (c) Universities: 2

Culture: (a) Dances: Mask dances of Bhutias, Nepalais and Lepchas are famous; (b) Festivals: Maghey Sankranti, Durga Puja, Chaite Dasai (Nepali), Pang Lhabsol and Losar (Bhutias), Namsoong and Tendong Hlo Rum Faat (Lepchas); (c) Crafts: Woollen carpets, with Tibetan designs, rough blankets, saris, cane and bamboo works, wood carving, handmade paper and silver work.

Tamil Nadu

Date of Formation: 15 Aug 1947 Madras province; 26 Jan, 1950 State until 1956 Part (A); 14 Jan, 1969 Renamed Tamil Nadu

Area: 1,30,058 sq km

Capital: Chennai

Neighbouring States: Kerala, Karnataka, Andhra Pradesh, Pondichery, Bay of Bengal, Indian Ocean

Population: 62,405,679; **Males:** 31,400,909; **Females:** 31,004,770; **Urban Population:** 43.86%; (a) **Population Density:** 480; (b) **Sex Ratio:** 986

Literacy: 73.5%; **Males:** 82.4; **Females:** 64.4.

No. of Districts: 30

| District | Area
(sq km) | Population
(2001) | Head-
quarters |
|----------------------|-----------------|----------------------|----------------------|
| Ariyalur | 1,937 | 694,058 | Ariyalur |
| Chennai | 174 | 42,16,268 | Chennai |
| Coimbatore | 7,469 | 42,24,107 | Coimbatore |
| Cuddalore | 3,678 | 22,80,530 | Cuddalore |
| Dharmapuri | 9,622 | 28,33,252 | Dharmapuri |
| Dindigul | 6,058 | 19,18,960 | Dindigul |
| Erode | 8,209 | 25,74,067 | Erode |
| Kancheepuram | 4,433 | 28,69,920 | Kancheepuram |
| Kanyakumari | 1,685 | 16,69,763 | Nagercoil |
| Karur | 11,096* | 9,33,791 | Karur |
| Madurai | 6,565 | 25,62,279 | Madurai |
| Nagapattinam | 2,716 | 14,87,055 | Nagapattinam |
| Namakkal | 3,429 | 14,95,661 | Namakkal |
| Nilgiris | 2,549 | 7,64,826 | (Ooty) |
| Udagamandalam | | | |
| Perambaloor | 3,691 | 11,81,029 | Perambaloor |
| Pudukkottai | 4,651 | 14,52,269 | Pudukkottai |
| Ramana-
thapuram | 4,232 | 11,83,321 | Ramana-
thapuram |
| Salem | 5,220 | 29,92,754 | Salem |
| Sivagangai | 4,086 | 11,50,753 | Sivagangai |
| Thanjavur | 3,397 | 22,05,375 | Thanjavur |
| Theni | 2,889 | 10,94,724 | Theni |
| Thiruvann-
amalai | 6,191 | 21,81,853 | Thiruvann-
amalai |
| Thiruvarur | 2,161 | 11,65,213 | Thiruvarur |
| Tirunelveli | 6,810 | 28,01,194 | Tirunelveli |
| Tiruvallur | 3,424 | 27,38,866 | Tiruvallur |
| Trichirappalli | 5,114 | 23,88,831 | Trichirappalli |
| Tuticorin | 4,621 | 15,65,743 | Tuticorin |
| Vellore | 6,077 | 34,82,970 | Vellore |
| Viluppuram | 7,217 | 29,43,917 | Viluppuram |
| Virudhunagar | 4,288 | 17,51,548 | Virudhunagar |

Villages: 16,317; **Towns:** 832

Governor: Surjit Singh Barnala

CM: M Karunanidhi

Legislative Bodies: State Legislature:

Unicameral-Seats: 234; Lok Sabha Seats: 39;

Rajya Sabha Seats: 18

Main Political Parties: All India Dravida Munetra Kazhagam, Dravida Munetra Kazhagam, Tamil Manila Congress

(Moopanar), Pattali Makkal Katchi, INC, CPI-M, CPI, BJP, MGR Anna DMK, All India Forward Bloc...

Seat of High Court: Chennai

Chief Languages: Tamil

Major Religions: Hinduism, Islam, Christianity.

Main Towns: Chennai, Coimbatore, Madurai, Vellore, Salem, Tanjavur, Cuddalore, Tutucorin, Tirunelveli, Udagamandalam, Nagercoil.

Geography: (a) Rivers: Palar, Kaveri, Vaigai, Cheyyar, Ponniyar, Meyar, Bhavani, Tamarapani, Chittar, Vellar, Noyal, Suruli, Vaipar, etc.; (b) Mountains: Along the whole length of the western part, is the range of the Western Ghats. The Palghat Gap about 25 km in width is the only marked break in the great mountain wall. To the south of this Palaghat Gap, the range is known as Anamalai (Elephant Hills).

On the east are the Palani Hills on which is situated the famous hill station Kodaikanal. In the famous Ootacamund area of the Nilgiris District, is the highest peak Doddabetta, 2640 metres above the sea level.

Economy: (a) Minerals: Lignite, limestone, magnesite, mica, quartz, felspar, bauxite, gypsum; (b) Industries: Cotton textile, automobiles, chemical fertilisers, paper and paper products, railway wagons and coaches, army tank, cement, iron & steel, computer peripherals and software; (c) Agricultural Products: Rice, maize, jowar, bajra, ragi, pulses, sugarcane, oilseed, cotton, chillies, coffee, tea, rubber, cardamom.

Transport & Communications: (a) Road Length: 150,095 km; (b) Railway Length 4181 km; (c) Main Railway Stations: Chennai, Madurai, Tiruchirappalli, Coimbatore and Salem; (d) Airports: Meenambakam International, Chennai; Madurai, Tiruchirappalli, Coimbatore, Salem; (e) Ports: Chennai and Thoo-thukudi (Tuticorin), Cuddalore, Nagapattinam.

Uttaranchal

Date of Formation: 9 November, 2000

Area: 53,483 sq km

Capital: (provisional): Dehradun

Neighbouring States: UP, Himachal Pradesh, countries- China and Nepal:

Population: 8,489,349; Males: 4,325,924; Females: 4,163,425, Urban Population: 25.59%; (a) Population Density: 159; (b) Sex Ratio: 964

Literacy: 71.6%; Males: 83.3; Females: 59.6.

No. of Districts: 13

| District | Area (sq km) | Population (2001) | Head-quarters |
|------------------|--------------|-------------------|---------------|
| Almora | 3,689 | 6,30,446 | Almora |
| Bageshwar | 1,696 | 2,49,453 | Bageshwar |
| Chamoli | 7,520 | 3,69,198 | Chamoli |
| Champawat | 2,004 | 2,24,461 | Champawat |
| Dehradun | 3,088 | 12,79,083 | Dehradun |
| Garhwal | 5,230 | 6,96,851 | Pauri |
| Haridwar | 2,360 | 14,44,213 | Haridwar |
| Nainital | 3,422 | 7,62,912 | Nainital |
| Pithoragarh | 7,169 | 4,62,149 | Pithoragarh |
| Rudrapur | 2,439 | 2,27,461 | Rudrapur |
| Tehri Garhwal | 3,796 | 6,04,608 | New Tehri |
| Udhamsingh Nagar | 3,055 | 12,34,548 | Rudrapur |
| Uttarkashi | 8,016 | 2,94,179 | Uttarkashi |

Villages: 16,826; **Towns:** 86

Governor: Sudershan Agarwal

CM: Narain Dutt Tiwari

Legislative Bodies: State Legislature: Unicameral -Seats: 70; Lok Sabha Seats: 5; Rajya Sabha Seats: 3; Jurisdiction of High Court: Uttaranchal

Main Political Parties: INC, BJP, BSP, Uttara-khand Kranti Dal, NCP...

Seat of High Court: Nainital

Chief Languages: Hindi, Garhwali, Kumaoni

Major Religions: Hinduism, Sikhism

Main Towns: Dehradun, Haridwar and Haldwari-cum-Kathgodam.

Geography: (a) Rivers: Yamuna, Bhagirathi, Ganga, Ramganga, Tons, and Kali; (b) Mountains: Shiwalik range, Great

Himalaya, Garhwal Hills, Kumaon Hills; (c) Peaks: Nanda Devi -7817m, Kamet-7756m, Badrinath-7138m, Dunagiri-7066m, Bandarpunch-63020; (d) Passes: Thaga La, Tsang Chok La, Muling La, Mana Pass, Niti Pass, Darma Pass, Lampiya Dhura Pass, Mangsha Dhura Pass.

(e) Hill Stations: Mussoorie - (Lal Tibba, Gun Hill, Kempty Falls, Lake, Surkunda Devi temple), Dehradun (IFRI, Sahasradhar(a), Chakrata, Nainital & Kumaon (mountain-eering), Ranikhet, Bhim Tal, Naukuchia Tal, Bage-shwar, and Kausani. (f) Six of the seven national parks including Corbett National Park, Rajaji National Park, Nanda Devi National Park, Valley of Flowers, Kedarnath Sanctuary are in Uttaranchal.

Economy: (a) Minerals: limestone, rock phosphate, dolomite, magnesite, copper, greynphyte, soapstone, gypsum, etc.; (b) Industries: forest-based, handicraft; (c) Agricultural Products:

Transport & Communications: (a) Road Length: 19,543 km.; (b) Main Railway Stations: Dehradun, Haridwar, Roorkee, Kotdwar, Kashipur, Udhamsingh Nagar, Kathgodam, Haldwani; (c) Airport Jolly Grant (Dehradun). Airstrips: Pantnagar (Udham Singh Nagar), (Naini-Seni (Pithoragarh), Gauchar (Chamoli) and Chinyalisaur (Uttarkashi) - are being built).

Places of Interest: Pilgrimage: Gangotri, Yamunotri, Char Dham (Badrinath, Ke-darnath, Rudraprayag and Chamoli), Joshi-math, Haridwar, Rishikesh, Hemkund Sahib & Nanakmatta. Others: Valley of Flowers, Pindaari Glacier & Milam Glacier (trekking), Roop Kund, Dayara Bugyal, Auli (winter sports), Pithoragarh & Banbassa (rock climbing and trekking), Rishikesh (river rafting).

Education: (a) Schools: 19200; (b) Colleges: 51; (c) Universities: 7

Culture: (a) Dances: folk dances; (b) Festivals: Kumbh Mela / Ardh Kumbh Mela

Governor: T.V. Rajeshwar

CM: Mulayam Singh Yadav

Legislative Bodies: State Legislature: Bicameral - Seats: Legislative Council - 108; Assembly - 355; Lok Sabha Seats: 80; Rajya Sabha Seats: 31

Main Political Parties: Samajwadi Party, BSP, BJP, INC, Rashtriya Lok Dal, Rashtriya Kranti Party, Apna Dal, CPI-M, Akhil Bharatiya Lok Tantrik Congress, JD-U, Akhil Bharat Hindu Mahasabha, Janata Party, Lok Jan Shakti Party, National Loktantrik Party, Samajeadi Janata Party (Rashtriya)...

Seat of High Court: Allahabad and a bench at Lucknow.

Chief Languages: Hindi and Urdu.

Major Religions: Hinduism, Islam.

Main Towns: Lucknow, Allahabad, Kanpur, Varanasi, Gorakhpur, Agra, Jhansi, Saharanpur, Etawah, Meerut, Ghaziabad, Noida, Aligarh, Faizabad.

Geography: (a) Rivers: Ganga, Yamuna, Gomti, Ghagra, Ramganga, Betwa; (b) Mountains: Lower hills of Shiwalik range, Kaimur range; (c) Plains: Gangetic Plain, Rohilkhand Plain, Avadh Plain. (d) Wildlife: Dudhwa Nat. Park, Corbett Nat. Park. Sanctuaries - Kedarnath, Govind and Chilla.

Economy: (a) Minerals: Limestone, magnesite, coal, rock phosphate, dolomite, silica-sand, pyrophyllite; (b) Industries: Edible oils, paper, cement, aluminium, railway equipment, industrial chemicals, Handloom, etc.; (c) Agricultural Products: Wheat, rice, maize, barley, gram, sugarcane, potatoes, pulses and oilseeds.

Transport & Communications: (a) Road Length: 1,03,795 km. NH-3774 km, SH- 7392 km, District Rd.-9911; (b) Railway Length; (c) Main Railway Stations: Lucknow (main junction), Agra, Kanpur, Allahabad, Mughalsarai, Jhansi, Moradabad, Varanasi, Tundla, Gorakhpur, Gonda, Faizabad, Bareilly, and Sitapur; (d) Airports: Lucknow, Kanpur, Varanasi, Allahabad, Agra, Jhansi,

Bareilly, Hindon (Gazia-bad), Gorakhpur, Sarsawa, Fursatganj (Rae-Bareilly).

Education: (a) Schools: 153959; (b) Colleges: 957; (c) Universities: 40

Employment ('99-00): 49,387,000; Unemployment ('99-00): 4.08%.

Culture: (a) Dances: Kathak; (b) Festivals: Kumbh Mela, Ardh Kumbh, Kartik Pooranmasi, Dewa Sharief (place of Waris Ali Shah - Bara-banki); (c) Fair: Jhoola fair - of dolls (Mathura, Vrindavan Ayodhya(a), Bateswar cattle fair; (d) Crafts: silk saree and brocade (Banarasi silk), chikankari - hand stitched design, zardosi work, metalware, woodcarving, wood work inlaid with brassware on black sheesham, marbleware, glasswork, glaze pottery, etc.

West Bengal

Date of Formation: 15 Aug 1947 Province; 26 Jan, 1950 State (until 1956: Part (A)

Area: 88,752 sq km

Capital: Kolkata

Neighbouring States: Orissa, Jharkhand, Bihar, Sikkim, countries-Nepal, Bhutan, Bangladesh; and Bay of Bengal.

Population: 80,176,197; Males: 41,465,985; Females: 38,710,212; Urban Population: 28.03%; (a) Population Density: 903; (b) Sex Ratio: 934

Literacy: 68.6%; Males: 77.0; Females: 59.6.

No. of Districts: 18

| District | Area (sq km) | Population (2001) | Head-quarters |
|-------------|--------------|-------------------|---------------|
| Bankura | 6,882 | 31,91,822 | Bankura |
| Birbhum | 4,545 | 30,12,546 | Suri |
| Bardhaman | 7,024 | 69,19,698 | Bardhaman |
| Kolkata* | 185 | 45,80,544 | Kolkata |
| Cooch Behar | 3,387 | 24,78,280 | Cooch-Behar |
| Darjeeling | 3,149 | 16,05,900 | Darjeeling |
| Hooghly | 3,149 | 50,40,047 | Chinsurah |
| Howrah | 1,467 | 42,74,010 | Howrah |
| Jalpaiguri | 6,227 | 34,03,204 | Jalpaiguri |
| Malda | 3,733 | 32,90,160 | English Bazar |
| Medinipur* | 14,081 | 96,38,473 | Medinipur |

| | | | |
|-------------------|-------|-----------|------------|
| Murshidabad | 5,324 | 58,63,717 | Berhampore |
| Adia | 3,927 | 46,03,756 | Krishnagar |
| Purulia | 6,259 | 25,35,233 | Purulia |
| North 24 Parganas | 4,094 | 89,30,295 | Barasat |
| South 24 Parganas | 9,660 | 69,09,015 | Alipore |
| Itanagar | 3,140 | 24,41,824 | Raiganj |
| Jalpaiguri | 2,219 | 15,02,647 | Balurghat |

Note: * The district Medinipur has been bifurcated on January 1, 2002 into Purba and Paschim Medinipur (the population figures of census 2001 are yet to be incorporated)

Villages: 51,043; **Towns:** 375

Governor: Gopal Krishna Gandhi

CM: Buddhadev Bhattacharaya

Legislative Bodies: State Legislature:

Unicameral -Seats: 294; Lok Sabha Seats:

42; Rajya Sabha Seats: 16

Main Political Parties: CPI-M, All India Trinamool Congress, INC, All India Forward Bloc, RSP, CPI, West Bengal Socialist Party, Gorkha National Liberation Front...

Seat of High Court: Kolkata

Chief Languages: Bengali

Major Religions: Hinduism, Islam, Christianity

Main Towns: Kolkata, Kharagpur, Medinipur, Asansol, Murshidabad, Howrah, Bardhaman, Siliguri, Purnia

Geography: (a) Rivers: Bhagirathi, Mayurakshi, Damodar, Kangsabati, Teesta, Torsha, Jaldhaka, Mahananda, Subarnarekha and Rupnarayan; (b) Mountains: Susnia Hills, Darjeeling (b) Wildlife: Sundarbans National Park and Tiger Reserve

Economy: (a) Minerals: Coal and China clay are two important minerals being exploited.; (b) Industries: engineering, automobiles, chemicals, pharmaceuticals, aluminium, ceramics, jute, cotton textiles, tea, paper, leather, footwear, bonemeal, bicycle, dairy, poultry and timber-processing. Central public sector undertakings include locomotive, cable, fertiliser, ship-building and ordnance; (c) agricultural Products: Rice, Wheat, pulses. Oilseed, Potato and Jute

km NH., (Mar. 31, 1999); (b) Railway Length 3,697.25 km.; (c) Main Railway Stations: Howrah, Asansol, Sealdah, Bandel, Bardhaman, Kharagpur, New Jalpaiguri. Calcutta's Metro Rail project, the first of its kind in the country, was commissioned in 1995; (d) Airports: Dum Dum International (Kolkata), Bagdogra, Kalaikunda, Panagarh, Malda, Barrackpore, Behala, Balurghat and Coochbehar; (e) Ports: Kolkata and Haldia

Education: (a) Schools: 59551; (b) Colleges: 442; (c) Universities: 28

Employment ('99-00): 22,656,000; Unemployment ('99-00): 14.99%.

Culture: West Bengal is known for its textiles; handlooms; Murshidabad and Baluchari silk sarees; Kantha embroidery; cane and bamboo work, leather craft, clay dolls & toys, masks, sholapith works; (a) Dances: Chhau (Purulia), Rabindra Nritya; (b) Festivals: Durga puja is the most important festival along with Kali puja or Diwali. Vasant Pan-chami, Lakshmi puja, Holi, Sivaratri, Janma-shtami, Id-ul-Fitr.

Delhi

Date of Formation: December 1991

Area: 1,483 sq km

Capital: Delhi

Neighbouring States: Haryana, UP.

Population: 13,850,507; Males: 7,607,234; Females: 6,243,273; Urban Population: 93.01%; (a) Population Density: 9,340; (b) Sex Ratio: 821

Literacy: 81.7%; Males: 87.3; Females: 74.7.

No. of Districts: 9

Villages: 165; **Towns:** 62

Lt. Governor: Shri B.L. Joshi

CM: Smt. Sheila Dikshit

Main Political Parties: INC, BJP, NCP, JD-Secular.

Chief Languages: Hindi, Punjabi, Urdu and English.

Major Religions: Hinduism, Islam, Sikhism, Christianity, Jainism

Main Towns: New Delhi, Delhi Cantt, Palam, Mehrauli, Shahdara, Alipur, Badaali, Nazafgarh, Narela.

Geography: Rivers: Yamuna

Economy: (a) Industries: electronics, light engineering machines, automobile parts, sport goods, bicycles, PVC goods, footwears, textiles, fertilisers, medicines, hosiery, leather goods, softwares, etc.; (b) Agricultural Products: wheat, bajra, jowar, gram, maize. Now fruit crops, vegetables, floriculture, dairy and poultry farming are more common.

Transport & Communications: (a) Road Length: Inter-State terminuses: Kasmere Gate, Sarai Kalen Khan and Anand Vihar; (b) Railways Delhi Metro Service is very important connecting important places within the city; (c) Main Railway Stations: Delhi Jn., New Delhi, Hazrat Nizamuddin; (d) Airports: Indira Gandhi International Airport, Domestic flight -Palam and for training Safdarjung.

Tourist Destinations: Purana Qila, Qutub Minar, Tughlaqabad Fort, Lal Quila (Red Fort), Jama Masjid, Humayun's Tomb, Lodi Gardens, Jantar Mantar, India Gate, Rashtrapati Bhavan, Sansad Bhavan, Raj Ghat, Bahai Temple, Birla (Lakshmi Narian) Mandir

National Museum, Nehru Memorial Museum, Craft Museum, National Museum of Natural History, National Museum of Modern Art, Central Cottage Industries Emporium (Janpath), States Emporia (Baba Kharak Singh Marg), Dilli Haat - handicrafts.

Education: (a) Schools: 4391; (b) Colleges: 107; (c) Universities: 16

Culture: (a) Festivals: Roshnara festival, Shalimar festival, Qutab festival, Winter Car-

| State | NSDP | PC NSDP |
|--------------|--------|---------|
| Andhra | 136173 | 17916 |
| Arunachal | 1628 | 14771 |
| Asom | 29419 | 11034 |
| Bihar | 45878 | 5445 |
| Chhattisgarh | 24980 | 11952 |
| Goa | 6736 | 49673 |
| Gujarat | 106099 | 20695 |
| Haryana | 53110 | 24820 |
| HP | 13320 | 21543 |
| J&K | 13697 | 13320 |
| Jharkhand | 25273 | 9392 |
| Karnataka | 93383 | 17518 |
| Kerala | 63817 | 19803 |
| MP | 73480 | 12027 |
| Maharashtra | 237112 | 24248 |
| Manipur | 2767 | 11410 |
| Meghalaya | 3529 | 15070 |
| Mizoram | 1777 | 19696 |
| Nagaland | 3864 | 18911 |
| Orissa | 37049 | 10021 |
| Punjab | 61976 | 25248 |
| Rajasthan | 78761 | |
| Sikkim | 1039 | |
| TN | 126797 | |
| Tripura | 5660 | |
| Uttaranchal | 11361 | |
| UP | 164137 | |
| WB | 144389 | |
| NCT: Delhi | 61575 | |
| UTs | | |
| A&N Is. | 935 | |
| Chandigarh | 4520 | |
| D&NH | -- | |
| Daman&Diu | -- | |
| Lakshadweep | -- | |
| Puducherry | 3609 | |

nival, Garden Tourism & Mango festiv
Besides International Industrial Exhibitions, Automobile Exhibitions, Defense Exhibitions, etc.

Andaman & Nicobar Is.

Date of Formation: 1 Nov, 1956- Union

Territory

Area: 8,249 sq km

Capital: Port Blair

Neighbouring States: Sea

Population: 3,56,265; Males: 192,985; Females: 163,280.

Until the colonisation of India, Andaman Islands were inhabited by 4 Negrito tribes viz., the Great Andamanese, Onge, Jarawa & Sentinalese and 2 Mongoloid tribes viz., Nicobarese and Shompens.

(a) Population Density: 43; (b) Sex Ratio: (females per 1000 males): 846

Literacy: 81.18%; Males: 86.07; Females: 75.29.

No. of Districts: 2

| District | Area (sq km) | Population (2001) | Head-quarters |
|----------|--------------|-------------------|---------------|
| Andaman | 6,408 | 3,14,239 | Port Blair |
| Nicobar | 1,841 | 42,026 | Car Nicobar |

Area, Sub Divisions, Tehsils

| Sub Division | Tehsils in the Sub division | Area sq km |
|------------------|-----------------------------|------------|
| 1. Mayabunder | 1. Diglipur | 884 |
| | 2. Mayabunder | 1348 |
| | 3. Rangat | 1098 |
| 2. South Andaman | 1. Port Blair | 3010 |
| | 2. Ferrargunj | |
| 3. Car Nicobar | 1. Car Nicobar | 129 |
| 4. Nancowrie | 1. Nancowrie | 1824 |

Villages: 547; **Towns:** 3

Lt. Governor: Lt. Gen. (Retd.) M.M. Lakhera

Legislative Bodies: State Legislature: None; Lok Sabha Seats: 1; No. of Rajya Sabha Seats: None

Seat of High Court: Calcutta H.C., circuit bench at Port Blair.

Chief Languages: Bengali, Hindi, Telugu, Tamil & Malayalam; Local dialects: Nicobarese, Nicobarese.

Main Towns: Shyamnagar, Nabagram,

Mayabunder, Uttara, Checkpoint, Herbertahad, Bamboo Flat, Wrightmyo, Port Meadows, Wandoor.

Geography: Mountains: The islands form the peaks of several submerged mountain range that extends for almost 1000km between Myanmar and Sumatra. Saddle Peak (732m), is the highest peak. Rivers: Alexandra, Dagmar, Galathea (Gr. Andamans), Kalpong (N. Andamans)

National Parks: Mahatma Gandhi Marine National Park, Rani Jhansi Marine National Park, Middle Buton Island, National Park, Mount Harriet National Park, North Buton Island National Park, Saddle Peak National Park, South Buton National Park, Campbell Bay National Park, Galathea National Park.

Economy: A total of 48,594 hectares of land is used for agriculture purposes. The principal crops are rice, coconuts and arecanut. Other crops are sugarcane, pulses, fruit and vegetables. Spices and rubber are being tried. Fisheries, tourism and ship repairing are the areas that can create jobs. There are 3 newspapers and 22 periodicals. Schools number 316 in all. The islands have a fleet of 57 ships. The installed capacity of power generation is 30,000 kw, with all revenue villages electrified; (a) Industries: There are 1421 registered small scale village units viz., fish processing factory, soft drinks, beverages, PVC conduit pipes, paints, furniture, etc., and handicraft units, (b) Agricultural Products: Rice, pulses, coconut, arecanut, coffee, sugarcane

Transport & Communications: (a) The islands are accessible by air and sea. It is connected to Kolkata, Chennai by air and by sea to Kolkata, Chennai and Vishakhapatnam. The UT's transport system serves 9 islands from Diglipur to Campbell Bay. Trunk Road services connects Mayabunder and Diglipur using 3 ferries. There are 5 wharfs and 41 jetties in the islands, (b) There is a network of

blacktapped roads; (c) Airports: Port Blair
Education: (a) Schools: 356; (b) Colleges: 3; (c) Universities: 0

Chandigarh

Date of Formation: UT since 1966
Area: 114 sq km
Capital: Chandigarh
Neighbouring States: Punjab, Haryana
Population: 9,00,914; Males: 508,224; Females: 392,690; Urban Population 89.78%; (a) Population Density: 7903; (b) Sex Ratio: 773
Literacy: 81.76%; Males: 85.65; Females: 76.65.

No. of Districts: One
Villages: 24; **Towns:** 1
Administrator: Gen. (Rtd.) S.F. Rodrigues
Legislative Bodies: Lok Sabha Seats: 1; Rajya Sabha Seats: None
Seat of High Court: Punjab & Haryana (at Chandigarh)

Chief Languages: Hindi, Punjabi and English

Major Religions: Sikhism, Hinduism
Main Towns: Chandigarh

Economy: (a) Industries: Hosiery, antibiotics, cycles, electrical metres, home appliances, electronic equipments. There are 15 large and medium scale industrial units in Chandigarh, out of which two are public sector undertakings. More than 3000 units are registered under small scale sector and they offer employment to about 30,000 persons. The neighbouring States have developed industrial estates right next to the city; (b) Agricultural Products: The Territory has 1,400 hectares of cultivable land. The irrigated area is about 1,450 ha. Wheat, maize and paddy are the major crops. The forest covers 27 per cent of the area.

Transport & Communications: (a) Road Length: NH-15. 275 km.; (b) Main Railway Stations: Chandigarh; (c) Airports: Chandigarh.

Education: (a) Schools: 162; (b) Colleges: 21; (c) Universities: 2

Culture: Festivals: Lodhi, Baisakhi

Dadra Nagar Haveli

Date of Formation: 11 Aug 1961
Area: 491 sq km
Capital: Silvassa
Neighbouring States: Gujarat, Maharashtra
Population: 2,20,451; Males: 121,731; Females: 98,720; Urban Population: 22.89%; (a) Population Density: 449; (b) Sex Ratio: 811

Literacy: 60.03%; Males: 73.32; Females: 42.99.

No. of Districts: One
Villages: 70; **Towns:** 2
Administrator: Rajani Kant Verma.
Legislative Bodies: State Legislature: None; Lok Sabha Seats: 1; Rajya Sabha Seats: None

Seat of High Court: Mumbai
Chief Languages: Bhili, Gujarati, Shilodi, Marathi and Hindi

Main Towns: Silvassa
Geography: Rivers: Silvasa, Khanvel
Economy: (a) Industries: Textiles, engineering, chemicals, electronics, cottage; (b) Agricultural Products: Ragi, wheat, sugarcane, paddy, pulses, mango, chiku, lichi

Transport & Communications: (a) Road Length: 556 km; (b) Main Railway Stations: Vapi is 18 km from Silvassa; (c) Airports: Nil.

Education: (a) Schools: 236; (b) Colleges: 0; (c) Universities: 0

Culture: Festivals: Diwaso, Bhawada, Kali Puja.

Daman & Diu

Date of Formation: 30 May 1987
Area: 112 sq km

Capital: Daman

Neighbouring States: Gujarat, Maharashtra, Dadra Nagar Haveli.

Population: 1,58,059 Males: 92,478; Females: 65,581, Urban Population: 36.26%; (a) Population Density: 1411; (b) Sex Ratio: 709

Literacy: 81.09%; Males: 88.40; Females: 70.37.

No. of Districts: 2

| District | Area (sq km) | Population (2001) | Head-quarters |
|----------|--------------|-------------------|---------------|
| Daman | 72 | 1,13,943 | Daman |
| Diu | 40 | 44,110 | Diu |

Villages: 23; **Towns:** 2

Administrator: Rajani Kant Verma.

Legislative Bodies: State Legislature: None

Legislative Bodies: Lok Sabha Seats: 2; Rajya Sabha Seats: None

Seat of High Court: Mumbai

Chief Languages: Gujarati, Hindi, Marathi

Major Religions: Hinduism, Christianity

Main Towns: Daman, Diu

Geography: Rivers: Kalem, Bhagwan (Daman)

Economy: (a) Minerals: Salt; (b) Industries: Fishing, tourism, and distillery.

Transport & Communications: (a) Road Length: 191 - Daman, 78 - Diu; (b) Nearest Railway Stations Vapi for Daman and Delvada for Diu; (c) Airports: Daman, Diu

Education: (a) Schools: 100; (b) Colleges: 2; (c) Universities: 0

Lakshadweep

Date of Formation: 1 Nov 1956 Laccadive, Minicoy, and Amindivi Islands union territory (separated from Madras (see Tamil Nadu)) 1 Nov 1973. Renamed Lakshadweep

Area: 32 sq km

Capital: Kavaratti

Neighbouring States: Kerala, Karnataka, Arabian Sea

Population: 60,595; Males: 31,118; Females: 29,477; Urban Population: 44.47%; (a) Population Density: 1,894; (b) Sex Ratio: 947
Literacy: 87.52%; Males: 93.15; Females: 81.56.

No. of Districts: 1. The entire group of islands is considered one district and divided into four tahsils.

Villages: 24; **Towns:** 3

Administrator: Rajendra Kumar

Legislative Bodies: State Legislature: None; Lok Sabha Seats: 1; Rajya Sabha Seats: None

Seat of High Court: Kerala (located in Kochi)

Chief Languages: Jesei (Dweep Bhasha), Mahal and Malayalam

Major Religions: Islam

Major Islands: Kavaratti, Agatti, Minicoy, Andrott, Kalpeni, Amini, Kadamatt, Kiltan.

Geography: Its 36 islands covering an area of 32 sq. km only 10 are inhabited. Andrott, 4.8 sq. kms, is the largest inhabited island and closest to the Kerala coast.

It is an archipelago of atolls, reefs and banks covered by the sea. The only coral islands in India are found in Lakshadweep. There are 27 coral islands. The 10 inhabited islands are Andrott, Amini, Agatti, Kiltan, Chetlat, Kadamath, Kalpeni, Kavaratti, Minicoy and 17 uninhabited islands. No island is wider than 1.5 kms.

Lakshadweep with its lagoon and a total 4,200 sq. km, 20,000 sq. km of territorial waters and about seven lakh sq. km of economic zone, is one of the largest maritime countries in our nation.

Economy: (a) Minerals: None; Industries: Fishing, tourism, handicrafts, travel, coir; (c) Agriculture: Coconut, nut, Copra.

Transport:

Islands are connected by

ships about 13 to

Airports: Agatti; (b) Port: Kavaratti, Minicoy, Agatti, Kadamatt, Kalpeni.

Education: (a) Schools: 36; (b) Colleges: 0; (c) Universities: 0

Puducherry (Pondicherry)

Date of Formation: 7 Jan 1963 Pondicherry union territory

Area: 492 sq. km

Capital: Pondicherry

Neighbouring States: Tamil Nadu, Karaikal (T.N.), Mahe (Kerala), Yanam (Andhra Pradesh, Bay of Bengal).

Population: 9,73,829; Males: 486,705; Females: 487,124; Urban Population: 66.57%; (a) Population Density: 2,029; (b) Sex Ratio: 1,001.

Literacy: 81.49%; Males: 88.89; Females: 74.13.

No. of Districts: 4

| District | Area (sq km) | Population (2001) | Head-quarters |
|----------------|--------------|-------------------|---------------|
| 1. Karaikal | 160 | 1,70,640 | Karaikal |
| 2. Mahe | 9 | 36,823 | Mahe |
| 3. Pondicherry | 293 | 7,35,004 | Pondicherry |
| 4. Yanam | 30 | 31,362 | Yanam |

Villages: 92; **Towns:** 6

Lt. Governor: Mukut Mithi

CM: N. Rangaswamy

Legislative Bodies: State Legislature: Unicameral -Seats: 30; Lok Sabha Seats:1; Rajya Sabha Seats:3

Political Parties: Indian National Congress, Dravida Munetra Kazagam, Puducherry Makkal Congress, All India Dravida Munetra Kazagam, Tamil Manila Congress - Moopanar, Bharatiya Janatha Party.

Seat of High Court: Madras High Court.

Chief Languages: Tamil, Telugu, Malayalam, English and French.

Major Religions: Hinduism, Islam, Christianity.

Main Towns: Pondicherry, Karaikal, Yanam, Mahe.

Geography: Rivers: Gingee, Mahe, Arasalar (Karaikal), Gauthami (Yanam)

Economy: (a) Industries: Textiles, computer hardware, electronics, plastic, bicycle parts, alcoholic beverages, electrical appliances, automobile parts, soap, rice bran oil, cotton yarn, sugar, glazed tiles, etc.; (b) Agricultural Products: Rice, pulses, coconut, arecanut, condiments etc. Groundnut, chillies are grown in Yanam.

Transport & Communications: (a) Road Length: 2,443 km.; (b) Main Railway Stations: Villupuram Jn. (nearest railway link.); (c) Airports: (nearest-Chennai); (d) Port: Pondicherry.

Education: (a) Schools: 657; (b) Colleges: 27; (c) Universities: 1

Culture: (a) Dances: Podikazhi attam; (b) Festivals: Mascarade (mask festival, Mar-Apr), Masimagam (Feb-Mar), eve of French Bastille Day- is marked by flags and parade; (c) Crafts: Hand-printed textiles, Kalakari batik, marbling work, handmade paper, bronzework.

Pondicherry's History

The modern history began with the arrival of the French in 1673, who controlled the territory for more than 280 years. The French East India Company established a settlement in 1674. Mahe was founded in 1725, Yanam in 1731 and Karaikal in 1739. Mahe was the site of prolonged battle between Britain and France in 18th & 19th centuries. The French captured the town in 1726. Yanam was part of the Chola empire.

Karaikal was a part of the Chola empire but was later captured by the Vijayanagaras, Marathas, and finally the French.

In 1954, the French, made a de facto transfer of the four territories to the Union of India. Its de jure transfer took place only in 1956 and the instrument of ratification was signed in 1962.

Note: Education# Source: Eco. Survey 2004-05, S-111, Tab. 9.3)

GENERAL KNOWLEDGE

PART

09

Abbreviations and Acronyms

AA: Alcoholics Anonymous

AAU: Asian Athletics Association

AFA: The Amateur Athletics Federation of India

ABC: Atomic Biological and Chemical (Warfare); Audit Bureau of Circulation

ABE: Association of Biotechnology Led Enterprises

AC: Ante Christum (Before Christ), Alternating Current; Ashoka Chakra; Air Conditioner.

ACR: Annual Confidential Report

AD: Anno Domini (in the year of our Lord)

ADAM: Animated Dissection of Anatomy for Medicine

ADB: Asian Development Bank

ADBS: Advanced Data Broadcast System

ADC: Aide-de-camp (help or assistant)

AFI: Athletics Federation of India

AFMC: Armed Forces Medical College

AFP: Agence France-Presse

AG: Accountant General; Adjutant General

AGP: Accelerated graphics port

AH: Anno Hegirae (Mohammed's flight from Mecca to Medina, 622 AD)

AI: Artificial Intelligence; Air India

AICTE: All India Council for Technical Education

AIDS: Acquired Immune Deficiency Syndrome

AIFF: All India Football Federation

AIG: American International Group

AIIMS: All India Institute of Medical Sciences

AINEC: All India Newspaper Editors' Conference

AITUC: All India Trade Union Congress

ALGOL: Algebraic Oriented Language

AM: Ante Meridiem (before noon); Amplitude Modulation

AMIE: Associate Member of the Institute of Engineers

ANA: All Nippon Airways

ANC: African National Congress

ANERT: Agency for Non-conventional Energy and Rural Technology

ANZUS: Australia, New Zealand US (Pacific Pact Nations)

AOC: Air Officer Commanding

APCTT: Asian and Pacific Centre for Transfer of Technology

AQA: Assessment and Qualification Alliance (UK)

APD: Automated Peritoneal Dialysis

APEC: Asia Pacific Economic Cooperation

APM: Administered Price Mechanism

ARPANET: Advanced Research Project Agency Network

ART: Assisted Reproductive Technologies

ASAP: as soon as possible

ASCII: American Standard Code for Information Interchange

ASEAN: Association of South East Asian Nations

ASEM: Asia-Europe Meeting

ASLV: Augmented Satellite Launch Vehicle

ASSOCHAM: Associated Chamber of Commerce and Industry

ASP: Application Service Provider, Attribution of Shareware Professionals

AT&T: American Telegraphic and Telephone Co. Ltd.

ATC: Air Traffic Control

ATM: Automated Teller Machine, ATM Manager

ATP: Adenosine Tri-Phosphate

ATS: Anti-Tetanus Serum

AU: Astronomical Units; African

ARD: Association of Voluntary Agencies for Rural Development
RC: Audio Visual Research Centre
SM: Ati Vishisht Seva Medal
ATAR: Aerobic Vehicle for Hypersonic Aerospace Transportation; Advanced Video Attribute Terminal Assembler and Recreator
WACS: Airborne Warning And Control System
2B: Business to Business
2C: Business to Consumer
IARC: Bhabha Atomic Research Centre
BC: British Broadcasting Corporation
BBS: Bulletin Board Service
BC: Before Christ
BCG: Bacillus Calmette-Guerin (anti-TB vaccine)
BENELUX: Belgium, Netherlands and Luxembourg
BGA: Blue Green Algae
BHEL: Bharat Heavy Electricals Ltd
bhp: brake horsepower
BIFR: Board for Industrial and Financial Reconstruction
BIMARU: Bihar, Madhya Pradesh, Rajasthan, Uttar Pradesh
BIMSTEC: Bangladesh, India, Myanmar, Sri Lanka, Thailand Economic Cooperation
BIOS: Basic Input Output System
BIS: Bank of International Settlements; Bureaus of Indian Standards
BIT: Binary Digit
BITSAT: Birla Institute of Technology and Science Admission Test
BOLT: Bombay Stock Exchange On-Line Trading; Build-Operate-Lease-Transfer
BOT: Build, Operate and Transfer
BP: Blood Pressure
BPL: Below Poverty Line
BPO: Business Process Outsourcing
BPR: Business Process Re-engineering
bps: bytes per second
BRO: Border Roads Organisation
BSE: Bombay Stock Exchange
BSF: Border Security Force

BSNL: Bharat Sanchar Nigam Limited
C2C: Consumer to Consumer
C-in-C: Commander-in-Chief
c.v.: Curriculum vitae
C/o: care of
CA: Chartered Accountant
CABE: Central Advisory Board of Education
CAD: Command Area Development; Computer Aided Design
CADA: Command Area Development Authority
CAFOD: Catholic Fund for Overseas Development
CAFTA: Central American Free Trade Agreement
CAG: Comptroller and Auditor General of India
CAMPCO: Central Arecanut Marketing and Processing Co-operative
CAN: Calcium Ammonium Nitrate
Cantab: Cantabrigian (of Cambridge University)
CAPA: Centre for Asia Pacific Aviation
CAPART: Council for Advancement of People's Action and Rural Technology
CAPIES: Computer-Aided Paper-less Examination System
CAS: Conditional Access System
CAT: Career Aptitude Test; Common Admission Test; Computerized Axial Tomography (also called CT); Computer Adaptive Test
CBA: Colliding Beam Accelerator.
CBDT: Central Board of Direct Taxes
CBFC: Central Board of Film Certification.
CBI: Central Bureau of Investigation
CBM: Confidence Building Measures
CBSE: Central Board of Secondary Education
CBU: completely built-up
CCPD: Continuous Ambulatory Peritoneal Dialysis
CD: Compact disk; Certificate of deposit
CDAC: Centre for the Development of Advanced Computing
CDM: cold dark matter

CECA: Comprehensive Economic Co-operation Agreement

CELTA: Certificate for English Language Teaching to speakers of Other Languages

CEO: Chief Executive Officer

CERN: Conseil Européen pour la Recherche Nucléaire (European Laboratory for Nuclear Research)

cert: Computer Emergency Response Team
cf compare / refer (L. Confer)

CFC: Chloro Fluoro Carbon

CFC: Common Fund for Commodities

CFL: Compact Fluorescent Lamps

CFO: Chief Financial Officer

CFSL: Central Forensic Science Laboratory

CGFNS: Commission on Graduates of Foreign Nursing Schools

CGI: Common Gateway Interface

CGPA: Cumulative Grade Point Average

CGS: Chief of General Staff; Centimetre, Gram, Second

CIA: Central Intelligence Agency

CIBIL: Credit Information Bureau India Ltd.

CID: Criminal Investigation Department

clf: cost, insurance and freight

CIGAR: Consultative Group on International Agricultural Research

CII: Confederation of Indian Industry

CIS: Commonwealth of Independent States

CISC: Complex instruction-set computing

CISCE: Council for the Indian School Certificate Examinations

CITU: Centre of Indian Trade Unions

CKD: Completely Knocked Down

CMIE: Centre for Monitoring the Indian Economy

CMP: Common Minimum Programme

CNC: Computerised Numerical Control

CNN: Cable News Network

CO: Commanding Officer

COD: cash on delivery

COFEPOSA: Conservation of Foreign Exchange and Prevention of Smuggling Act

COMPS: Coastal Ocean Monitoring and Prediction System

COMSAT: Communications Satellite Corporation

CONCORD: Council of North Indian States for Co-operation and Regional Development

COPRA: Consumer Protection Act

CORBA: Common Object Request Broker Architecture

COSMEP: Consortium of Schools of Mathematics Experience Programme

COSTFORD: Centre of Science and Technology for Rural Development

CPI/M: Communist Party of India / Marxist

CPR: Cardio Pulmonary Resuscitation

CPWD: Central Public Works Department

CRIDA: Central Research Institute for Dryland Agriculture

CRIS: Centre for Railway Information System

CRISIL: Credit Rating Information Services of India Ltd.

CRM: Customer Relations Management

CRR: Cash Reserve Ratio

CRY: Child Relief and You

CSC: Customer Service Centre

CSIR: Council of Scientific and Industrial Research

CSO: Central Statistical Organisation

CT: Computerised Tomography

CTBT: Comprehensive Test Ban Treaty

CVC: Chief Vigilance Commission

CVR: Cockpit Voice Recorder

CWC: Chemical Weapons Convention; Congress Working Committee

Cwt: Hundredweight (112 lb)

CYMK: Cyan, Yellow, Magenta, Kinda

D & C: Dilation and Curettage

D.Litt.: Doctor of Literature

D.Phil.: Doctor of Philosophy

D.Sc: Doctor of Science

DAP: Di-Ammonium Nitrate

DC: Direct Current; District of Columbia

DDT: Dichloro-diphenyl-trichloro-ethane

DET: Directory Entry Table

DG: Dei gratia (by the grace of God)

DHSD: Duplex-High Speed Data Service

DIG: Deputy Inspector General
DMA: Direct Memory Access
DMK: Dravida Munetra Kazhagam
DMZ: Demilitarized Zone
DNA: Deoxyribo-nucleic Acid
DNB: Diplomat of the National Board
DPBS: Developmental Press Bulletin Service
DPEP: District Primary Education Programme
DPT: Diphtheria, pertussis and tetanus
 (vaccine)
DSB: Digital Satellite Broadcasting
DSL: digital subscriber line
DSP: Digital Signal Processing
DTH: Direct to Home
DTP: Desktop Publishing
DTS: Digital Theatre System
DV: Deo Volente (God willing)
DVC: Damodar Valley Corporation
DVD: Digital Versatile/Video Disc
DVI: Digital Video Interactive
DVS: Desktop Video-Conferencing Software
E & OE: Errors and Omissions Excepted
E&Y: Earnest & Young
E-MAIL: Electronic Mailing
EAM: emergency action message
ECA: Essential Commodities Act
ECG: Electro Cardiogram
ECGC: Export credit guarantee corporation
 of India
ECOSOC: Economic and Social Council (UN)
ECR: Electron Cyclotron Resonance
EDI: Electronic Data Interchange
EDMS: Electronic Document Management
 System
EDT: Eastern Daylight Time
EEG: Electro Encephalo-gram
EEZ: Exclusive Economic Zone
EFTA: European Free Trade Association
e.g.: exempli gratia (for example)
EGP: Exterior Gateway Protocol
EIS: Executive Information System
EL: Electro-luminescent
ELINT: Electronic Intelligence
ELISA: Enzyme Linked Immuno-Sorbent Assay

ELT: English Learning and Teaching
EMI: Equated Monthly Instalments
EMRC: Educational Media Research Centre
ENIAC: Electronic Numerical Integrator and
 Calculator
ENT: Ear, Nose and Throat
EOF: end of file
EOS: Electronic Online System International
EOU: Export Oriented Unit
EPABX: Electronic Private Automatic Branch
 Exchange
EPCI: Enhanced Proliferation Control Initiative
EPG: Eminent Persons Group
EPI: Expanded Programme of Immunisation
EPIRB: Emergency Position Indicating Radio
 Beacon
EPNS: Electroplated Nickel Silver
EPROM: Erasable, Programmable Read Only
 Memory
EPS: Encapsulated Postscript
EPZ: Export Processing Zone
EQ: Emotional Quotient
ER&DC: Electronic Research and Development
 Center
ERM: European Exchange Rate Mechanism
ERNET: Educational and Research Network
ERNIE: Electronic Random Number Indicator
 Equipment
ESA: European Space Agency
ESCAP: Economic and Social Commission
 for Asia and the Pacific
ESMA: Essential Services Maintenance Act
ESP: Extra Sensory Perception
ESR: Electron Spin Resonance
ESSD: Environmentally and Socially Sustainable
 Development
et al.: et alii (and others)
et. seq: et sequentia (& what follows)
etc. et: cetera (and so forth)
ETT: Embryo Transfer Technology
EURATOM: European Atomic Community
EUTELSAT: European Telecommunications
 Satellite
EVA: Economic Value Added

- ic valuation of the environment
- video Recording
- and Agriculture Organisation
- Average Quality; Frequently Asked
- on
- eral Bureau of Investigation
- ge Benefit Tax
- Fast Breeder Test Reactor
- Fly-By-Wire
- ood Corporation of India; Fertilizer Cor-
- oration of India
- RA:** Foreign Currency Non-Resident Ac-
- counts
- RA:** Foreign Contribution Regulation Act
- DI:** Foreign Direct Investment
- EMA:** Foreign Exchange Management Act
- FICCI:** Federation of Indian Chambers of
Commerce and Industry
- FIDE:** Federation Inter-nationale d'Echecs
- FIFA:** International Football Federation (Fed-
eration Internationale de Football Associa-
tion)
- FI:** Foreign Institutional Investors
- FIPB:** Foreign Investment Promotion Board
- FIR:** First Information Report
- FIRE:** Fully integrated robotised engine
- AG:** Fibre optic Link Around the Globe
- LC:** Foreign Legal Consultant
- FM:** Frequency modulation
- FMC:** Forward Markets Commission
- FMCT:** Fissile Material Cut-off Treaty
- fob:** free on board
- for:** free on rail
- FOSDIC:** Film Optical Sensing Device for
Input to Computers
- FPD:** Flat panel display
- FPO:** Fruit Products Order
- FRCP:** Fellow of the Royal College of Physicians
- FRCS:** Fellow of the Royal College of Sur-
geons
- FRGS:** Fellow of the Royal Geographical Society
- FRS:** Fellow of the Royal Society
- FTIL:** Films and Television Institute of India
- FVI:** for your information
- 3G:** Third Generation
- G2B:** Government-to-Citizens
- G2C:** Government-to-Citizens
- G7:** Group of Seven (US, UK, Germany, France,
Italy, Japan and Canada) G8 includes G7
plus Russia
- GAAP:** Generally Accepted Accounting Prac-
tices
- GAIN:** Global Alliance for Improved Nutri-
tion
- GATE:** Graduate Aptitude Test in Engineer-
ing
- GATS:** General Agreement on Trade and Ser-
vices
- GAVI:** Global Alliance for Vaccines and
Immunisation
- GBP:** Geosphere-Biosphere Programme
- G.B.E.:** Grand Cross of the British Empire
- G.B.H.:** Grievous Bodily Harm
- CCC:** Gulf Co-operation Council
- GCR:** Grey Component Replacement
- GDP:** Gross Domestic Product
- GDR:** Global Depository Receipt
- GEDIS:** Gateway Electronic Data Interchange
Services
- GEF:** Global Environment Fund
- GEMS:** Gateway Electronic Mail Service
- GHQ:** General Headquarters
- GI:** Government Issue (American soldiers)
- GIS:** Geographical Information System
- GJEP:** Gems and Jewellery Export Prom-
otion Council
- GMAT:** Graduate Management Admi-
nistration Test
- GMDSS:** Global Maritime Distress and
Communication System
- GMO:** Genetically Modified Organism
- GMRT:** Giant Metrewave Radio Telescope
- GMT:** Greenwich Mean Time
- GNP:** Gross National Product
- GOOS:** Global Ocean Observing System
- GOP:** Grand Old Party (Republican)
- GPA:** Grade Point Average
- GPS:** Global Positioning System
- GPSS:** Gateway Packet Switching
- GRACE:** Ground Rules and C

AM: Geo Referenced Area Management
GR: Graduate Record Examination
CS: Gender Reassignment Surgery (Sex Change)
CR: Carden Reach Shipbuilders
and Engineers Ltd.
CS: Geological Survey of India
LV: Geo-Synchronous Satellite Launch Vehicle
hide
SM: Global System for Mobile Communications
ions
SP: Generalised System Preference
ST: Goods and Service Tax
GUI: Graphical User Interface
GVW: Gross Vehicle Weight
HAL: Hindustan Aeronautics Limited.
HB: Hard Black (Pencil)
HBV: Hepatitis-B Virus
HDML: Hyper Devices Mark-up Language
HF: High Frequency
HFD: High Frequency Doppler
HIV: Human Immunodeficiency Virus
HMI: Himalayan Mountaineering Institute
HMV: His Master's Voice, Heavy Motor Vehicle
hide
Hon: honourable, Honorary
hp: horse power
HRPT: High Resolution Picture Transmission
HSD: High Speed Diesel
HSRRSS: High Spatial Resolution Remote Sensing Satellite
HT: High Tension
HTML: Hyper Text Markup Language
TR: High Temperature Reactor
http: Hypertext Transfer Protocol
IUDCO: Housing and Urban Development Corp.
HV: High Voltage
HVAC: Heating, Ventilating and Air Conditioning
HVNET: High Speed VSAT Network
I.e.: id est (that is)
IA: Indian Airlines
IA&AS: Indian Audit and Accounts Services
IAAI: International Airport Authority of India

IAAG: Institute of Applied Agriculture
IARI: Indian Agricultural Research Institute
IAS: Indian Administrative Service
IATA: International Air Transport Association
ibid or lb. ibidem (Latin): in the same place
book or chapter
IBM: International Business Machines
IBRD: International Bank for Reconstruction and Development
IC: Indian (airlines)
ICAO: International Civil Aviation Organisation
ICAR: Indian Council of Agricultural Research
ICBM: Inter-Continental Ballistic Missile
ICCR: Indian Council for Cultural Relations
ICJ: International Court of Justice
ICMR: Indian Council of Medical Research
ICPD: International Conference on Population and Development
ICRA: Investment Information and Credit Rating Agency of India
ICRISAT: International Crops Research Institute for Semi Arid Tropics
ICSE: Indian Certificate of Secondary Education
tion
ICSI: Intra-Cytoplasmic Sperm Injection
ICU: Intensive Care Unit
ICWA: Indian Council of World Affairs
ICWAI: Institute of Cost Accountants of India
tants of India
IDA: International Development Association
IDBI: Industrial Development Bank of India
IDE: Integrated Device Environment
IDF: India Development Fund
IEEE: Institute of Electrical and Electronic Engineers
IELTS: International English Language Testing System
IFPRI: International Food Policy Research Institute
IFAD: International Fund for Agricultural Development
IFC: International Finance Corporation
IFSC: International Financial Services Centre
IFSS: International Financial Services Sector

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|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| IGF: India Growth Fund | IPS: Indian Police Service; Inter Press Service |
| IGDR: Indira Gandhi Institute of Development Research | IQ: Intelligence Quotient |
| IGNOU: Indira Gandhi National Open University | Iq: idem quod (the same as) |
| IGY: International Geophysical Year | IRA: Irish Republican Army |
| IIMC: Indian Institute of Mass Communication | IRBM: Intermediate Range Ballistic Missile |
| IIPA: Indian Institute of Public Administration | IRC: International Red Cross |
| IISCO: Indian Iron and Steel Company | IRD: Integrated Rural Development Programme |
| IISS: International Institute of Strategic Studies | IRE: Indian Rare Earth Ltd. |
| IIT: Indian Institute of Technology | IREDA: Indian Renewable Energy Development Agency |
| ILA: Indian Library Association | IRRI: International Rice Research Institute |
| ILO: International Labour Organisation | IRS: Indian Revenue Service |
| IMAP: Internet Mail Access Protocol | ISBN: International Standard Book Number |
| IMCO: Inter-government Maritime Consultations Organisation | ISC: Indian School Certificate |
| IMEWS: Integrated Missile Early Warning Satellites | ISDN: Integrated Services Digital Network |
| IMF: International Monetary Fund | ISI: Indian Standards Institution, Inter Services Intelligence |
| In cognito: in disguise | ISKCON: International Society for Krishna Consciousness |
| INA: Indian National Army | ISO: International Standards Organisation |
| INDIPEX: Indian International Philatelic Exhibition | ISRO: Indian Space Research Organisation |
| infra dig infra dignitatum (below status) | ISSN: International Standard Serial Number |
| I.N.R.I. : Iesus Nazarenus Rex Iudaeorum (Jesus of Nazareth, King of the Jews) | IST: Indian Standard Time |
| INS: Indian Newspaper Society | ITA: Information Technology Agreement |
| INSAT: Indian National Satellite | ITBP: Indo-Tibetan Border Police |
| INTACH: Indian National Trust for Art and Cultural Heritage | ITes: Information Technology enabled services |
| INTELSAT: International Telecommunication Satellite | ITI: Indian Telephone Industries; Industrial Training Institute |
| INTUC: Indian National Trade Union Congress | ITU: International Telecommunication Union |
| IOC: Indian Oil Corporation | IUCAA: International University Centre for Astronomy and Astrophysics |
| IOU: I Owe You | IUCD: Intra-Uterine Contraceptive Device |
| IP: Internet Protocol | IUI: Intrauterine Insemination |
| IPC: Indian Penal Code | IVF: In-Vitro Fertilisation |
| IPCL: Indian Petro-Chemicals Corporation Ltd | IVM: In-vitro Maturation |
| IPI: International Press Institute | I-R: Infra Red |
| IPO: Initial Public Offering | JCO: Junior Commissioned Officer |
| | JEE: Joint Entrance Examination |
| | JIPMER: Jawaharlal Nehru Institute of Post-graduate Medical Education and Research |
| | JNCASR: Jawaharlal Nehru Centre for Advanced Scientific Research |
| | JP: Justice of Peace |
| | JPEG: Joint Photographic Expert Group |

KFC: Kentucky Fried Chicken
KG: Knight of the Garter; Kindergarten
KISCO: Kudremukh Iron and Steel Company
KKK: Ku Klux Klan (U.S. secret society-Anti-Negro, Anti-Jewish)
KMT: Kuomintang (Chinese National Party)
KRC: Konkan Railway Corporation
KRL: Kochi Refineries Ltd.
KYC: Know Your Customer
Kymco: Kwang Yang Motor Company (S. Korea)
LASER: Light Amplification by Stimulated Emission of Radiation
LASIK: Laser in situ Kerato-mileusis
LCA: Light Combat Aircraft
LCD: Liquid Crystal Display, Least Common Denominator
LCM: Lowest Common Multiple
LDL: Low-Density Lipoprotein (Cholesterol)
LERMS: Liberalised Exchange Rate Management Scheme
LeT: Lashkar-e-Taiba
LIC: Life Insurance Corporation (of India)
LIPS: Language Independent Programme Subtitles
LIS: Land Information System
LL.B.: Bachelor of Laws
LMC: Large Magallanic Cloud
Loc.cit: Loco citato (at the place quoted)
LPG: Liquefied Petroleum Gas
LSD: Lysergic acid di-ethylamide
Lt.Col.: Lieutenant Colonel
LTTE: Liberation Tigers of Tamil Elam
M: Monsieur (Mister)
M.A.: Magister Artium (Master of Arts)
M.D: Doctor of Medicine
M1: Money supply with public
M3: Aggregate monetary resources
MA: Milliampere
MAD: Mutually Assured Destruction
MAIT: Manufacturers Association for Information Technology
MARS: Mumbai Amateur Radio Society
MASER: Microwave Amplification by Stimulated Emission of Radiation

MBA: Master of Business Administration
MBBS: Bachelor of Medicine and Bachelor of Surgery
MbPT: Mumbai Port Trust
MCC: Marylebone Cricket Club
MCF: Master Control Facility (of ISRO) - Bhopal
MCI: Medical Council of India
MCLR: Medium Capacity Long Range
MDA: market development assistance
MFN: Most Favoured Nation
MICR: Magnetic ink character recognition
MIDI: Musical Instrument Digital Interface
MIFOR: Mumbai Inter-Bank Forward Offer Rate
MIPS: Million Instructions per Second
MIRU: Million Independently targeted re-entry Vehicle
MISA: Maintenance of Internal Security Act
Misc.: Miscellaneous
MIT: Massachusetts Institute of Technology, US; Master Instruction Tape
MKS: Metre Kilogram Second (System)
MI: Military Intelligence
MLA: Member of Legislative Assembly
Mlle: Mademoiselle (Miss)
MLP: multiple line printer
Mme: Madame (Mrs.)
MMTC: Minerals and Metals Trading Corporation
MMX: Matrix Manipulation Extension; Multimedia extension
MNC: Multi-National Corporation
MODEM: modulator demodulator
MODVAT: Modified Value Added Tax
MOR: middle-of-the-Road
MOSFET: Metal Oxide Semiconductor Field Effect Transistor
MOU: Memorandum of Understanding
MP: Member of Parliament; Madhya Pradesh
MPEG: Motion Picture Experts Group
mph: miles per hour
MPLAD: Member of Parliament Local Area Development
MRA: Moral Re-Armament

MRCP: Member of the Royal College of Physicians

MRTPC: Monopolies and Restrictive Trade Practices Commission

MS/MSS: Manuscript/ Manuscripts

MSCI: Morgan Stanley Capital International

MT: Metric Ton

MTBE: methyl-tertiary-butyl-ether

MTCR: Missile Technology Control Regime

MVC: Maha Vir Chakra

NAA: National Airports Authority

NAAC: National Assessment and Accreditation Council

NABARD: National Bank for Agriculture and Rural Development

NAC: National Advisory Council

NAFED: National Agricultural Co-operative Marketing Federation

NAFTA: North American Free Trade Agreement

NALCO: National Aluminium Company Ltd.

NASA: National Aeronautics and Space Administration

NASDAQ: National Association of Securities Dealers Automated Quotation

NASSCOM: National Association of Software and Service Companies

NATO: North Atlantic Treaty Organisation

NATPAC: National Transportation Planning and Research Centre

NAV: Net Asset Value

NB: nota bene (note well)

NBE: National Board of Examination

NBOT: National Board of Trade

NBW: Non-Bailable Warrant

NBWL: National Board on Wild Life

NC: Network Computer

NCAER: National Council of Applied Economic Research

NCC: National Cadet Corps

NCERT: National Council of Educational Research and Training

NCI: Nursing Council of India

NCO: Non-Commissioned Officer

NCSA: National Centre for Supercomputing

Applications; National Computer Security Association

NDA: National Defence Academy

NDC: National Development Council

NDDB: National Dairy Development Board

NDES: New Data Encryption Standard

NEOCONS: Neo-Conservatives

NEXARD: Next Generation Radar (Doppler radar)

NGO: Non-Government Organisation; Non-Gazett-ed Officer

NHPC: National Hydroelectric Power Corporation

NICD: National Institute of Communicable Diseases

NIMHANS: National Institute of Mental Health And Neuro Sciences

NIPER: National Institute of Pharmaceutical Education and Research

NISCAIR: National Institute for Science Communication and Information Resources

NIV: National Institute of Virology

NKC: National Knowledge Commission

NLC: Neyveli Lignite Corporation

NMDC: National Mineral Development Corporation

NMITLI: New Millennium Indian Technology Leadership Initiative

NMR: Nuclear Magnetic Resonance

NMS: Network Management System

NOC: No Objection Certificate

NPA: Non-performing Assets

NPC: National Productivity Council

NPCIL: Nuclear Power Corporation of India Ltd.

NPEEE: National Programme for Earthquake Engineering Education

NPL: National Physical Laboratory; Non-performing Loans

NPT: Nuclear Non-Proliferation Treaty

NRF: National Renewal Fund

NRS: National Readership Survey

N&S: Network and Systems

NSA: National Security Advisor

NSEI: National Stock Exchange of India

NSG: Nuclear Suppliers Group
NSP: Native Signal Processing
NSUI: National Students Union of India
NSTM: Nano Science and Technology Mission
NTPC: National Thermal Power Corporation
NTSC: National Television System Commission
NTSE: National Talent Search Examination
O & M: Organisation & Methods
OAPEC: Organisation of Arab Petroleum Exporting Countries
OAS: Organisation of American States
OAU: Organisation of African Unity (now AU)
OBC: Other Backward Classes
OBU: Offshore Banking Unit
OCD: Obsessive Compulsive Disorder
OCR: Optical Character Recognition
ODA: Overseas Development Administration
ODI: Open Data Link Interface
OECD: Organisation for Economic Co-operation and Development
OGL: Open General Licence
OIC: Organisation of Islamic Conference
OIGS: On India Government Service
OK: All Correct (slang)
OLE: Object Linking and Embedding
ONGC: Oil and Natural Gas Corporation
OOP: Object Oriented Programme
Op. cit.: Opero citato (in the work cited)
OPCW: Organisation for the Prohibition of Chemical Weapons
OPEC: Organisation of Petroleum Exporting Countries
OPV: Oral Polio Vaccine
ORT: Oral Rehydration Therapy
OSCAR: Orbiting Satellite Carrying Amateur Radio
OXFAM: Oxford Committee for Famine Relief
Oxon: Oxoniensis (of Oxford University)
PAC: Public Accounts committee
PAL: Phase Alternation Line
PAN: Permanent Account Number
PAR: Performance Appraisal Report

PAT: Profit After Tax
PAYE: pay as you earn
PC: post card; Personal Computer
p.c.: per cent
PCA: Professional Chess Association
PCM: Pulse code modulation
PCMCIA: Personal Computer Memory Card International Association
PDA: Preventive Detention Act, Personal Digital Assistant
PDS: Public Distribution System
PEARL: Package for Effective Administration of Registered Laws
PFRDA: Pension Fund Regulatory and Development Authority
PEC: Project and Equipment Corporation
PEN: (International club of) Poets, Playwrights, Essayists, Editors and Novelists
PERT: Project Evaluation and Review Technique
PETA: People for Ethical Treatment of Animals
PGIMER: Post Graduate Institute of Medical Education and Research
PGM-FI: Programmed Fuel Injection
PGP: Pretty Good Privacy
Ph.D.: Doctor of Philosophy (Philosophiae Doctor)
PHDCCI: Punjab, Haryana, Delhi Chamber of Commerce and Industries
PIB: Press Information Bureau
PIGS: Pre-implantation Genetic Screening
PII: Press Institute of India
PIL: Public Interest Litigation
PIM: Personal Information Management
PIN: Postal Index Number
Pixel: Picture element
PLAB: Professional and Linguistic Assessment Board
PM: Post Meridie; Prime Minister
PMG: Post Master General
PMUPEP: Prime Minister's Urban Poverty Eradication Programme
PNR: Passenger Name Recorder
POTA: Prevention of Terrorism Act
POW: Prisoner of War

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|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
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| NASSCOM: National Association of Software and Service Companies | NMITLI: New Millennium Indian Technology Leadership Initiative |
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Pixel: Picture element
PLAB: Professional and Linguistic Assessment Board
PM: Post Meridien; Prime Minister
PMG: Post Master General
PMUPEP: Prime Minister's Urban Poverty Eradication Programme
PNR: Passenger Name Recorder
POTA: Prevention of Terrorism Act
POW: Prisoner of War

PPP: Purchasing power parity; Point-to-point Protocol

PPPP: Public Private Panchayat Partnership

PPS: Post Post Scriptum (additional post script)

Pro-tem: Pro tempore (for the time being)

PROLOG: Programming logic

PS: Post Scriptum (written after); Private Secretary

PSLV: Polar Satellite Launch Vehicle

PSN: Processor Serial Number

PTA: Parent-Teacher Association

PTI: Press Trust of India

PTO: Please Turn Over

PVC: Poly vinyl Chloride; Param Vir Chakra

PWD: Public Works Department; Persons with Disability

PZD: Partial Zonal Drilling

QED: Quod Erat Demonstrandum [which was to be demonstrated or proved]

Q Queue: qed Quod Erat Demon-strandum (that which was to be demonstrated)

QR: Quantitative restriction

QSO: Quasi-stellar object

qv: quod vide ((which see)

R&D: Research and Development

R&M: Renovation and Modernisation

RABMN: Remote Area Business Message Network

RAC: Reservation Against Cancellation

RADAR: Radio Detecting and Ranging

RAM: Random Access Memory

RAPD: Random Amplified Polymorphic Deoxyribonucleic Acid

RAW: Research & Analysis Wing

RBI: Reserve Bank of India

RCC: Reinforced Cement Concrete

RD: refer to drawer

RDx: Research Department Explosive (Cyclotrim-ethylin Trinitrate)

REM: Rapid Eye Movement

RFC: Request for Comments

RH: Rainwater Harvest

RIP: Requiescat in pace (May he or she rest in peace); Raster Image Processor

RISC: Reduced instruction-set computing

RITES: Rail India Technical & Economic Services

RLO: Returned Letters Office

RMS: Railway Mail Service

RNA: Ribonucleic acid

ROM: Read Only Memory

RONW: return on net worth

RPM: Revolutions Per Minute

RSE: Renewable Source of Energy

RSS: Rashtriya Swayam Sewak Sangh

R.S.V.P./R.s.v.p.: Repondez S'il Vous Plait . (Reply if you please)

RTG: Radio-isotope Thermoelectric Generator

RTI: Right to Information

SAA: South African Airways

SACLANT: Supreme Allied Commander Atlantic

SASE: Self-addressed stamp-ed envelope

S &T: Science and Technology

SAC: Space Application Centre

SAIL: Steel Authority of India Limited .

SAM: Surface to Air Missile

SAPTA: South Asian Preferential Trade Agreement

SARS: Severe Acute Respiratory Syndrome

SASER: Sound Amplification by Stimulated Emission of Radiation

SAT: Scholastic Aptitude Test

SAVE: SAARC Audio-Visual Exchange

SCABA: Self contained Air Breathing Apparatus

SCI: Shipping Corporation of India

SCM: Supply Chain Management

SCSI: Small Computer Systems Interface

SCUBA: Self-contained Underwater Breathing Apparatus

SDR: Special Drawing Rights

SEANWFZ: South East Asia Nuclear Weapons Free Zone

SEBI: Securities and Exchange Board of India

SENSEX: Sensitivity Index (of Share Price)

SET: Secure Electronic Transmission

SEZ: Special Economic Zone

SGPC: Siromani Gurudwara Prabandak Committee

SHAPE: Supreme Headquarters Allied Powers, Europe

SHG: Self Help Group

SIDS: Sudden Infant Death Syndrome (Crib Death)

SIFT: Sperm Intra-Fallopian Transfer

SIM: Subscriber Information Module

SIP: Systematic Investment Planning

SITA: Suppression of Immoral Traffic Act

SITE: Satellite Instructional Television Experiment

SLBM: Submarine Launched Ballistic Missile

SLFP: Sri Lanka Freedom Party

SLR: Statutory Liquidity Ratio; Single Lens Reflex

SLV: Satellite Launch Vehicle

SMTP: Simple Mail Transfer Protocol

SMS: Short Message Service

SNA: System Network Architecture

SOHO: Small Office Home Office

SOLAS: Safety of Life at Sea

SPCA: Society for Prevention of Cruelty to Animals

SPECT: Single Photon Emission Computed Tomography

SPTM: Self-Printing Ticketing Machine

STAR(TV): Satellite Television Asian Region Ltd.

START: Strategic Arms Reduction Talks

STC: State Trading Corporation

STD: Subscriber Trunk Dialling; Sexually Transmitted Diseases

STP: Software Technology Park

STQC: Standardisation Testing and Quality Control

SUNFED: Special United Nations Fund for Economic Development

SUV: sports utility vehicle

SVP: Saturated Vapour Pressure

Swift: Secure worldwide immediate fund transfer

SWOT: Strengths, Weaknesses, Opportunities and Threats

T & D: Transmission & Distribution

TA: Territorial Army; Traveling Allowance

TACAMO: take charge and move over

TADA: Terrorist and Disruptive Activities (Prevention) Act

TAFE: Technical And Further Education (in Australia)

TAFE: Tractor and Farm Equipment Ltd.

TAFTA: Trans-Atlantic Free Trade Agreement

TAPS: Tarapur Atomic Power Station

TB: tuberculosis

TBSE: Technology Bureau for Small Enterprise

TCP: Transfer Call Protocol, Transmission Control Protocol

TDA: Trade Development Authority

TDMA: Time Division Multiple Access

TELCO: Tata Engineering and Locomotive Company

TEQIP: Technical Education Quality Improvement Programme

TERLS: Thumba Equatorial Rocket Launching Station

TFT: Thin-Film Transistor

TFYP: Tenth Five Year Plan

TIFAC: Technology and Information Forecasting and Assessment Council

TIFR: Tata Institute of Fundamental Research

TIPS: Technology Information Pilot System

TIPTOP: Tape input-tape output

TISCO: Tata Iron and Steel Company

TLC: Total Literacy Campaign

TMO: Telegraphic Money Order

TNG: The Next Generation

TNT: Trinitro-toluene

TOEFL: Test of English as a Foreign Language

TPM: Total Productivity Maintenance

TQM: Total Quality Management

TRACT: Transportable Remote Area Communications Terminal

TRIMS: Trade-Related Investment Measures

TRIPS: Trade-Related Intellectual Property Rights

TRYSEM: Training of Rural Youth for Self-employment

TSE: Test of Spoken English

TTC: Telemetry, Tracking & Command

TTE: Travelling Ticket Examiner

TWE: Test of Written English

TWT: Two Way Time

UAV: Unmanned Aerial Vehicle

UCI: Universal Childhood Immunisation

UCIL: Uranium Corporation of India Ltd.

UCLA: University of California Los Angeles

UCR: Under Colour Removal

UGC: University Grants Commission

UHF: Ultra High Frequency

ULEV: Ultra Low Emission Vehicle

ULFA: United Liberation Front of Asom

UNCED: UN Conference on Environment & Development

UNCIP: United Nations Commission for India & Pakistan

UNCLOS: United Nations Convention on the Law of the Sea

UNCSTD: United Nations Conference on Science and Technology for Development

UNCTAD: United Nations Conference on Trade and Development

UNEP: United Nations Environment Programme

UNESCO: United Nations Educational, Scientific and Cultural Organisation

UNFPA: United Nations Population Fund

UNI: United News of India

UNICEF: United Nations International Children's Emergency Fund (now, 'United Nations Children's Fund')

UNIDO: United Nations Industrial Development Organisation

UNIFEM: United Nations Development Fund for Women

UNITA: Union for the Total Independence of Angola

UNMOGIP: United Nations Military Observer Group in India and Pakistan

UNOPS: UN Office for Project Services

UNPROFOR: UN Protection Force

UNRRA: United Nations Relief and Rehabilitation Administration

UNU: United Nations University

UPA: United Progressive Alliance

UPS: Uninterrupted Power Supply

UPSC: Union Public Service Commission

URL: Uniform Resource Locator

USAID: United States Agency for International Development

USQ: Udaipur Solar Observatory

USP: Unique selling proposition

VABAL: Value Based Advance Licensing

VAN: Virtual Area Network

VAT: Value Added Tax

VATIS: Value Added Technology Information Service

VBT: Vainu Bappu Telescope

VC: Vice-Chancellor, Victoria Cross; Venture Capital

VCR: Video Cassette Recorder

VD: Venereal Disease (see STD)

VDIS: Voluntary Disclosure of Income Scheme

VESA: Video Electronics Standard Association

VHRR: Very High Resolution Radiometer

VHS: Video Home System

VIP: Very Important Person

VIRUS: Vital Information Resources Under Siege

VPI: Virtual Private Internet

VPP: Value Payable Post

VRML: Virtual Reality Modelling Language

VRS: Voluntary Retirement Scheme

VSAT: Very Small Aperture Terminal

VSSC: Vikram Sarabhai Space Centre

VTEC: Variable Valve Timing and Lift Electronic Control

VTR: Video Tape Recorder

WAIS: Wide Area Information Service

WAN: World Association of Newspapers

WARDEC: Wargaming Development Centre

WAY: World A Council of Churches

WCC: World Council of Churches

WDM: World Debt Market

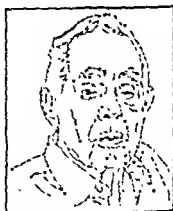
WEF: World Economic Forum
WFTU: World Federation of Trade Unions
WFUL: World Federation of Trade Unions
WG: Working Group
WGPA: Weighted Grade Point Average
WHO: World Health Organisation
WIMP: Weakly Interacting Massive Particle;
 Windows, Icons, Menus, Pointers
WMD: Weapons of Mass Destruction
WMO: World Meteorological Organisation
WPI: Wholesale Price Index
WTI: World Tribunal on Iraq
WTO: World Trade Organisation
WTP: willingness-to-pay
WWF: World Wildlife Fund, now renamed
 Worldwide Fund for Nature

WWW: World Wide Web
WYSIWYG: What you see is what you
 get
XBT: Expandable Battery Thermoplastic
Xmas: Christmas
XML: Extensible Mark-up Language
XPD: X-Ray Photoelectron Diffraction
YMCA: Young Men's Christian Association
YWCA: Young Women's Christian Association
ZIFT: Zygote Intrafallopian Transfer
ZIP: Zone Improvement Plan
ZOPFAN: Zone of Peace, Freedom and
 Neutrality
9/11: September Eleven
7/7: July Seven

Books, Authors and Their Nationalities

- A Brief History of Time:** Stephen Hawking (Br)
A China Passage: John Kenneth Galbraith (US)
Accidental Death of an Anarchist: Dario Fo (It)
A Coll to Honour: Jaswant Singh (Ind)
A Clockwork Orange: Anthony Burgess (Br)
A Critique of Pure Reason: Immanuel Kant (Ger)
A Doll's House: Ibsen (Nor)
A Farewell to Arms: Ernest Hemingway (US)
A Fine Balance: Rohinton Mistry (Ind- Can)
A Handful of Dust: Evelyn Waugh (Br)
A Heartbreaking Work of Staggering Genius: Dave Eggers (US)
A House for Mr. Biswas: V.S. Naipaul (Ind-Br)
A Million Mutinies Now: V.S. Naipaul (Ind-Br)
A Midsummer Night's Dream: William Shakespeare (Br)
A Passage to England: Nirad C. Choudhuri (Ind-Br)
A Passage to India: E.M. Forster (Br)
A Prisoner's Scrapbook: L.K. Advani (Ind)
A Sense of Time: H.S. Vatsyayan (Ind)
A Strange and Sublime Address: Amit Chaudhary (Ind)
A Streetcar Named Desire: Tennessee Williams (US)
A Study of History: Arnold J. Toynbee (Br)
A Suitable Boy: Vikram Seth (Ind-US)
A Tale of Two Cities: Charles Dickens (Br)
A Thousand Days: Arthur M. Schlesinger (US)
A Thousand Suns: Dominique Lapierre (Fr)
A Village by the Sea: Anita Desai (Ind-US)
A Voice for Freedom: Nayantra Sehgal (Ind)
A Week with Gandhi: Louis Fischer (Fr)
A Woman's Life: Guy de Maupassant (Fr)
Absolute Friends: John le Carré (Br)
Absolute Power: David Baldacci (US)
Adam Bede: George Eliot (Br)
Adonis: P.B. Shetty (Br)
Adventures of Tom Sawyer: Mark Twain (US)
Afternoon Raag: Amit Chaudhary (Ind)
Agni Veena: Kazi Nazrul Islam (Ind)
Albarnama: Abdul Fazel (Ind)
Alice in Wonderland: Lewis Carroll (Br)
All Quiet on the Western Front: Erich Maria Remarque (Ger)
All the King's Men

- All the President's Men*: Carl Bernstein (US) & Bob Woodward (US)
All Things Bright and Beautiful: James Herriot (Br)
All's Well that Ends Well: William Shakespeare (Br)
Amar Kash: Amar Singh (Ind)
An American Dilemma: Gunnar Myrdal (Swe)
An American Tragedy: Theodore Dreiser (US)
An Area of Darkness: V.S. Naipaul (Ind-Br)
An Autobiography: Jawaharlal Nehru (Ind)
An Equal Music: Vikram Seth (Ind-US)
An Idealist View of Life: Dr. S. Radhakrishnan (Ind)
Anandmath: Bankim Chandra Chatterjee (Ind)
And Quiet Flows the Don: Mikhail Sholokhov (Br)
Angels & Demons: Dan Brown (US)
Angels in America: Tony Kushner (US)
Animal Farm: George Orwell (Br)
Anna Karenina: Leo Tolstoy (Rus)
Antony and Cleopatra: William Shakespeare (Br)
Ape and Essence: Aldous Huxley (Br)
Around the World in Eighty Days: Jules Verne (Fr)
Arrowsmith: Sinclair Lewis (US)
As You Like It: W. Shakespeare (Br)
Asia and Western Dominance: K. M. Panikkar (Ind)
Asian Drama: Gunnar Myrdal (Swe)
Atonement: Ian McEwan (Br)
August 1914: Alexander Solzhenitsyn (Rus)
Aunt Julia and the Scriptwriter: Maria Vargas Llosa (Per)
Autobiography of an Unknown Indian: Nirad C. Chaudhuri (Ind-Br)
Babbitt: Sinclair Lewis (US)
Back to Methuselah: George Bernard Shaw (Br)
Bandicoot Run: Manohar Malgankar (Ind)
Beginning of the Beginning: Bhagwan Sri Rajneesh (Ind)
Being Digital: Nicholas Negroponte (US)
Beloved: Toni Morrison (US)
Ben Hur: Lewis Wallace (US)
Beyond the Horizon: Eugene O'Neill (US)
Bharat Bharati: Maithili Saran Gupta (Ind)
Biographia Literaria: Samuel Taylor Coleridge (Br)
Black Holes and Baby Universes: Stephen Hawking (Br)
Bliss was it in that Dawn: Minoia Masani (Ind)
Blink: Malcolm Gladwell (Ind-Br)
Blood, brain and beer: David Ogilvy (Br)
Banfire of the Vanities: Tam Walfie (US)
Born Free: Joy Adamson (Cze-Br)
Bawling Far Claumbine; Stupid White Men; Roger & Me: Michael Moore (US)
Brave New World: Aldous Huxley (Br)
Bread, Beauty and Revolution: Khwaja Ahmad Abbas (Ind)
Breakfast at Tiffany's: Truman Capote (US)
Breakthrough: Gen. Moshe Dayan (Isr)
Brick Lane: Monica Ali (Ban-Br)
Brathers Karamazov: Feodor Dostoyevsky (Rus)
Bubble, The: Mulk Raj Anand (Ind)
Business @ the Speed of Thought: Bill Gates (US)
Byzantium: W.B. Yeats (Ir)
Cadillac Desert: Marc Reisner (US)
Caesar and Cleopatra: George Bernard Shaw (Ir)
Candida: George Bernard Shaw (Ir)
Candide: Voltaire (Fr)
Catch-22: Joseph Heller (US)
Catcher in the Rye: J.D. Salinger (US)
Centennial: James A. Michener (US)
Checkmate: Malarie Blackman (UK)
Chemmeen: Thakazhi Siva-sankara Pillai (Ind)
Cherry Orchard: Anton Chekov (Rus)
Chidambaram: Sumitranandan Pant (Ind)



Thakazhi Sivasankara Pillai

Nationalities: Alg: Algerian; Austral: Australian; Aus: Austrian; Ban: Bangladeshi; Br: British; Bra: Brazilian; Can: Canadian; Ch: Chinese; Chi: Chilean; Cal: Columbian; Cze: Czech; Dan: Danish; Fr: French; Ger: German; GK: Greek; Hun: Hungarian; Ind: Indian; Ir: Irish; Ira: Iranian; Isr: Israel; It: Italian; Jap: Japanese; Mor: Moroccan; Nig: Nigerian; Nor: Norwegian; Pak: Pakistani; Per: Peruvian; Pol: Polish; Rus: Russian; Scot: Scottish; Spa: Spanish; SA: South African; Swe: Swedish; Swi: Swiss; Tib: Tibetan; Tri: Trinidadian; US: American

Childe Harold's Pilgrimage: Lord Byron (Br)
Chithirappaavai: P.V. Akilandam (Ind)
Chitra: Rabindra Nath Tagore (Ind)
Choma's Drum: K. Shivaram Karanth (Ind)
Chronicle of a Death Foretold: Gabriel Garcia Marquez (Col)

Circle of Reason: Amitav Ghosh (Ind)
Circles of Silence: Preeti Singh (Ind)
City of Joy: Dominique Lapierre (Fr)
City of Djinn: William Dalrymple (Scot)
Comedy of Errors: William Shakespeare (Br)
Coming of Age in Samoa: Margaret Mead (US)

Common Sense: Thomas Paine (Br-US)
Communist Manifesto: Karl Marx (Ger)
Confessions: J.J. Rousseau (Swi-Fr)
Confessions of a Lover: Mulk Raj Anand (Ind)
Confessions of an English Opium Eater: Thomas De Quincey (Br)

Confidential Clerk: T.S. Eliot (US-Br)
Conquest of Self: Mahatma Gandhi (Ind)
Coolie: Mulk Raj Anand (Ind)
Count of Monte Cristo: Alexander Dumas (Fr)
Coverly Papers: Joseph Addison (Br)
Creation: Gore Vidal (US)
Crescent Moon: Rabindra Nath Tagore (Ind)
Crime and Punishment: Feodor Dostoyevsky (Rus)

Crisis into Chaos: E.M.S. Namboodiripad (Ind)
Cry, the Beloved Country: Alan Paton (SA)

Dark Horse: Tami Hoag (US)
Darkness at Noon: Arthur Koestler (Hun-Br)
Darkness Visible: William Styron (US)
Das Kapital: Karl Marx (Ger)
David Copperfield: Charles Dickens (Bri)
Days of Grace: Arthur Ashe (US) & Arnold Rampersad (Tri-US)

Death in Venice: Thomas Mann (Ger)
Death of a City: Amrita Pritam (Ind)
Death of a Salesman: Arthur Miller (US)
Debauch: Emile Zola (Fr)
Decameron: Giovanni Boccaccio (It)
Decline and Fall of the Roman Empire: Edward Gibbon (Bri)

Descent of Man: Charles Darwin (Bri)
Deserted Village: Oliver Goldsmith (Ir-Br)
Devdas: Sharat Chandra Chatterjee (Ind)
Diamond Dust: Anita Desai (Ind-US)
Dilemma of Our Time: Harold Joseph Laski (Br)
Diplomacy: Henry Kissinger (US)
Discovery of India: Jawaharlal Nehru (Ind)

Distant Drums: Manchar Malgorkar (Ind)
Divine Comedy: Dante Alighieri (It)
Divine Life: Swami Sivananda (Ind)
Doctor Zhivago: Boris Pasternak (Rus)
Doctor's Dilemma: George Bernard Shaw (Ir)
Don Juan: Lord Byron (Br)
Don Quixote: Miguel de Cervantes (Spa)
Dr. Jekyll and Mr. Hyde: Robert Louis Stevenson (Scot)
Durgesh Nandini: Bankim Chandra Chatterjee (Ind)
Down Under: Bill Bryson (US)
Dust to Dust: Tami Hoag (US)

Eoarth: Emile Zola (Fr)
Eats, Shoots & Leaves: Lynne Truss (Br)
Elegy written in a Country Churchyard: Thomas Gray (Br)
Eminent Victorians: Lytton Strachey (Br)
Emma: Jane Austen (Br)
Ends and Means: Aldous Huxley (Br)
English August: Upamanyu Chatterjee (Ind)
Essays of Elia: Charles Lamb (Br)
Essays on Gita: Sri Aurobindo Ghosh (Ind)
Eternal Humulosity: Major H.P.S. Ahluwalia (Ind)
Ethics for the New Millennium: The Dalai Lama (Tib)
Expanding Universe: Arthur Stanley Eddington (Br)

Faces of Everest: Major H.P.S. Ahluwalia (Ind)
Family Matters: Rohinton Mistry (Ind-Can)
Falling Over Backwards: Arun Shourie (Ind)
Family Reunion: T.S. Eliot (US-Br)
Far from the Madding Crowd: Thomas Hardy (Br)

Farewell the Trumpets: James Mims (Br)
Farewell to Arms: Ernest Hemingway (US)
Father and Sons: Ivan Turgenev (Rus)
Faust: J.W. Von Goethe (Ger)
Final Days: The: Bob Woodward (US) and Carl Bernstein (US)
First Circle: Alexander Solzhenitsyn (Rus)
Five Point Someone: What not to Do at IIT: Chetan Bhagat (Ind)
For Whom the Bell Tolls: Ernest Hemingway (US)

Forsyth Saga: John Colman (Br)
Fortynine Days: Amrita
Frankenstein: Mary Shelley
Freedom at Midnight: L
& Dominique Lapierre

French Revolution: Thomas Carlyle (Scot)
Friends and Foes: Sheikh Mujibur Rahman (Ban)
From Here to Eternity: James Jones (US)

Ganadevota: Tara Shankar Bandopadhyaya (Ind)

Gandhi and Stalin: Louis Fisher (Fr)
Gardener: Rabindra Nath Tagore (Ind)

Gathering Storm: Winston Churchill (Br)

Ghosirom Kotwal: Vijay Tendulkar (Ind)

Gitanjali: Rabindra Nath Tagore (Ind)

Glimpses of World History: Jawaharlal Nehru (Ind)

Godan: Prem Chand (Ind)

Golden Threshold: Sarojini Naidu (Ind)

Gone With The Wind: Margaret Mitchell (US)

Good Earth: Pearl S. Buck (US)

Good Times, Bad Times: Harold Evans (Br)

Goodbye, Mr. Chips: James Hilton (Br)

Grammar of Politics: Harold Joseph Laski (Br)

Great Expectations: Charles Dickens (Br)

Great Gatsby: F. Scott Fitzgerald (US)

Growth of the Soil: Knut Hamsun (Nor)

Guide: R.K. Narayan (Ind)

Gulag Archipelago: Alexander Solzhenitsyn (Rus)

Gulliver's Travels: Jonathan Swift (Ir)

Gypsy Mosola: Preethi Nair (Ind)



Winston Churchill

Half a Life: V S Naipaul (Ind-Br)

Hamlet: W. Shakespeare (Br)

Harvest: Manjula Padmanabhan (Ind)

Harry Potter and the Goblet of Fire: J.K. Rowling (Br)

Heat and Dust: Ruth Prawer Jhabwala (Ger-Br)

Heir Apparent: Dr. Karan Singh (Ind)

Heritage: Anthony West (US)

Heroes and Hero Worship: Thomas Carlyle (Scot)

Himalayan Blunder: Brigadier J.P. Dalvi (Ind)

Hindu View of Life: Dr. S. Radhakrishnan (Ind)

Hinduism: Nirad C. Choudhuri (Ind-Br)

Homage to Catalonia: George Orwell (Br)

How Ta Know God: Deepak Chopra (Ind-US)

Hullabalaa in a Guava Orchard: Kiran Desai (Ind)

Hunchback of Notre Dome: Victor Hugo (Fr)

Hungry Stones: Rabindra Nath Tagore (Ind)

Iacacca: Lee Iacocca (US)

Ideas and Opinions: Albert Einstein (Ger-Swi-US)

I follow the Mohatma: K.M. Munshi (Ind)

Idols: Sunil Gavaskar (Ind)

If I am Assassinated: Z.A. Bhutto (Pak)

If Only: Geri Halliwell (Br)

Ignited Minds: A.P.J. Abdul Kalam (Ind)

In Defence of Globalisation: Jagdish Bhagwati (Ind-US)

In Evil Hour: Gabriel Garcia Marquez (Col)

In Memoriam: Alfred Lord Tennyson (Br)

In Retrospect: The Tragedy and Lessons of Vietnam - McNamara (US)

In Search of Gandhi: Richard Attenborough (Br)

India in the New Millennium: Dr. P.C. Alexander (Ind)

India Changes: Taya Zinkin (Fr)

India Discovered: John Keay (Br)

India Divided: Rajendra Prasad (Ind)

India: Emerging power: Stephen Philip Cohen (US)

India-Another Millennium: Romila Thapar (Ind)

India Unbound: Gurcharan Das (Ind)

India of Our Dreams: M.V. Kamath (Ind)

India Remembered: Percival & Margaret Spear (Br)

Indio Wor of Independence: V.D. Savarkar (Ind)

Indio Wins Freedom: Abul Kalam Azad (Ind)

India's Priceless Heritage: N.A. Palkhivala (Ind)

Indian Intelligence Unveiled: M.K. Dhar (Ind)

Indian Philosophy: Dr. S. Radhakrishnan (Ind)

Indiro: The Life of Indiro Nehru Gandhi: Katherine Frank (US)

Inscrutable Americans: Anurag Mathur (Ind)

Inside Asia, Inside Europe, Inside Africa, etc: John Gunther (US)

Interpreter of Maladies: Jhumpa Lahiri (Ind-US)

Interpreting Early India: Romila Thapar (Ind)



Rabindra Nath Tagore

Intimacy: Jean Paul Sartre (Fr)
Invisible Man: H.G. Wells (Br)
Iran Awakening: Shirin Ebadi (Ira)
Is New York Burning?: Larry Collings (US) &
 Dominique Lapierre (Fr)
Is Paris Burning?: Larry Collins (US) & Domini-
 que Lapierre (Fr)
Isabella: John Keats (Br)

Jai Somnath: K.M. Munshi (Ind)
Jane Eyre: Charlotte Bronte (Br)
Jean Christophe: Romain Rolland (Fr)
Journalism and Politics: Chalapathi Rau, M. (Ind)
Julius Caesar: William Shakespeare (Br)
Jungle Book: Rudyard Kipling (Br)
Jungle Girl: Ginu Kamani (Ind)
Jurassic Park: Michael Crichton (US)

Kamasutra: Vatsyayana (Ind)
Kane and Abel: Jeffrey Archer (Br)
Kanthapura: Raja Rao (Ind)
Kashmir: A Tragedy of Errors: Tavleen Singh
 (Ind)
Kayar: Thakazhi Sivasankara Pillai (Ind)
Kenilworth: Sir Walter Scott (Scot)
Kidnapped: Robert Louis Stevenson (Scot)
Kim: Rudyard Kipling (Scot)
King Lear: William Shakespeare (Br)
Kubla Khan: Samuel Taylor Coleridge (Br)

Ladies Coupe: Anita Nair (Ind)
La Peste: Albert Camus (Alg-Fr.)
Lady Chatterley's Lover: D.H. Lawrence (Br)
Lajja: Taslima Nasreen (Ban)
Lost Burden: Upamanyu Chatterjee (Ind)
Lost Things: C.P. Snow (Br)
Contract (Social Contract)
 J. Rousseau (Fr.)
and Kindly Light: Vincent Sheean (US)
Leaders: Richard Nixon (US)
Leaves of Grass: Walt Whitman (US)
Les Misérables: Victor Hugo (Fr.)
Leviathan: Thomas Hobbes (Br)
Le Dharma: Sri Aurobinda (Ind)
Life is Elsewhere: Milan Kundera (Cze-Fr.)
Life of Pi: Yann Martel (Can)
Life of Samuel Johnson: James Boswell (Scot)
Waiting to Tell the Tale: Gabriel Garcia Marquez
 (Col)
War: Vladimir Nabokov (Rus-US)
Loneliness of the Long Distance Runner: Allan
 Sillitoe (Br)

Long Day's Journey into Night: Eugene O'Neill
 (US)
Long Walk to Freedom: Nelson Mandela (SA)
Look Back in Anger: John Osborne (Br)
Lord of the Flies: William Golding (Br)
Love Story: Erich Segal (US)

Macbeth: W. Shakespeare (Br)
Magic Mountain: Thomas Mann (Ger)
Mahatma Gandhi and his Apostles: Ved Mehta
 (Ind-US)
Mahatma Gandhi: Romain Rolland (Fr)
Main Street: Sinclair Lewis (US)
Making Sense of Chindia: Jairam Ramesh (Ind)
Malgudi Days: R.K. Narayan (Ind)
Man and Superman: George Bernard Shaw (Ir)
Man of Property: John Galsworthy (Br)
Man, Beast and Virtue: Luigi Pirandello (Br-Ita)
Man-eaters of Kumaon: Jim Corbett (Br)
Managing for the Future: Peter Drucker (US)
Managing for Results: Peter Drucker (US)
Mankind and Mother Earth: Arnold Toynbee
 (Br)
Many Worlds: K. P. S. Menon (Ind)
Maximum City: Bombay Lost and Found.
 Suketu Mehta (Ind-Br)
Mayor of Casterbridge: Thomas Hardy (Br)
Mein Kampf: Adolf Hitler (Ger)
Memories of Hope: Gen. Charles de Gaulle (Fr)
Men are from Mars, Women are from Venus.
 John Gray (US)
Middlemarch: George Eliot (Br)
Midnight in the Garden of Good and Evil: John
 Berendt (US)
Midnight's Children: Salman Rushdie (Ind-Br)
Mill on the Floss: George Eliot (Br)
Minorities in a Democracy: Humayun Katar
 (Ind)
Moby Dick: Hermann Melville (US)
Moonwalk: Michael Jackson (US)
Mother India: Katherine Mayo (US)
Mother: Maxim Gorky (Rus)
Much Ado About Nothing: William Shakespeare
 (Br)
Murder in the Cathedral: T. S. Eliot (US-Br)
My Days: R. K. Narayan (Ind)
My India: S. Nihal Singh (Ind)
My Life: Bill Clinton (US)
My Life and Times: V. V. Giri
My Music, My Life: P. B. Barua
My Own Season: M. Indira
My Presidential Years: R. Venk

Mystic River: Dennis Lehane (US)
My Son's Father: Dom Moraes (Ind)
My Story: Jackie Chan (CH)
My Truth: Indira Gandhi (Ind)

Nana: Emile Zola (Fr)
Never At Home: Dom Moraes (Ind)
New Dimensions of India's Foreign Policy: A. B. Vajpayee (Ind)

Nice Guys Finish Second: B.K. Nehru (Ind)
Nineteen Eighty Four: George Orwell (Br)
Nisheeth: Uma Shankar Joshi (Ind)
No Full Stops in India: Mark Tully (Br)

No Logo: Naomi Klein (Can)
Northern Lights: Philip Pullman (Br)
Nostradamus and his Prophecies: Edgar Leoni (Fr.)

Nostromo: Joseph Conrad (Pol-Br)
Jerusalem: Larry Collins (US) & Dominique Lapierre (Fr)

Odakkuzhal: G. Shankara Kurup (Ind)
Of Human Bondage: W. Somerset Maugham (Br)

Oliver Twist: Charles Dickens (Br)
On The Threshold of Hope: Pope John Paul II (Pol)

One Hundred Years of Solitude: Gabriel Garcia Marquez (Col)

One World and India: Arnold Toynbee (Br)
One World: Wendell Wilkie (US)

Operation Bluestar: The True Story: Lt. Gen. K.S. Brar (Ind)

Operation Shylock: Philip Roth (US)
Othello: William Shakespeare (Br)

Our Films, Their Films: Satyajit Ray (Ind)
Out of Africa: Isak Dinesen (Dan)

Painter of Signs: R. K. Narayan (Ind)
Pakistan Cut to Size: D. R. Manekar (Ind)
Pakistan: The Gathering Storm: Benazir Bhutto (Pak)

Pale Blue Dot: Carl Sagan (US)
Panchatantra: Vishnu Sharma (Ind)
Paradise Lost: John Milton (Br)

Pather Panchali: Bibhuti Bhushan (Ind)
Patriotic Gore: Edmund Wilson (US)
People Like Us: Pavan Varma (Ind)

Peter Pan: J. M. Barrie (Br)
Plain Speaking: N. Chandra-babu Naidu (Ind)

Plan of Attack: Bob Woodward (US)
Pleading Guilty: Scott Turow (US)

Portrait of India: Ved Mehta (Ind-US)
Post Office: Rabindra Nath Tagore (Ind)
Prelude: William Wordsworth (Br)

Preoccupations: Seamus Heaney (Ir)
Present at the Creation: Dean Acheson (US)
Pride and Prejudice: Jane Austen (Br)

Prince: Niccolo Machiavelli (It)
Principia Mathematica: Bertrand Russell (Br)
Prison Diary: Jayaprakash Narayan (Ind)

Private Lives: Noel Coward (Br)
Profiles in Courage: John F. Kennedy (US)
Pygmalion: George Bernard Shaw (Ir)

Rabbit, Run: John Updike (US)
Rangbhoomi: Prem Chand (Ind)
Ravan & Eddie: Kiran Nagarkar (Ind)

Reading Lolitha in Tehran: Azar Nafisi (Ira)
Rebecca: Daphne du Maurier (Fr)
Rebel, The: Albert Camus (Alg-Fr)

Red Badge of Courage: Stephen Crane (US)
Red Earth and Pouring Rain: Vikram Chandra (Ind)

Red Star Over China: Edgar Snow (US)
Reflections on the French Revolution: Edmund Burke (Br)

Remembering Babylon: David Malouf (Austral)
Rendezvous with Rama: Arthur C. Clark (Br)
Revolution from Within: Gloria Steinem (US)

Riding the Storm: Harold MacMillan (Br)
Riot: A Novel: Shashi Tharoor (Ind)
Rise and Fall of the Third Reich: William L. Shirer (US)

Robinson Crusoe: Daniel Defoe (Br)
Romeo and Juliet: William Shakespeare (Br)
Room at the Top: John Braine (Br)

Rosencrantz and Guildenstern are Dead: Tom Stoppard (Br)

Rubaiyat-i Omar Khayyam: Edward Fitzgerald (Br)

Saket: Maithili Sharan Gupta (Ind)
Sanctuary: William Faulkner (US)
Scam, The: Who Won, Who Lost, Who Got Away: Debashis Basu (Ind)

and Sucheta Dalal (Ind)
Scarlet Letter: Nathaniel Hawthorne (US)
Secrets and Lies: Dilip Hiro (Ind-Br)

Seven Lamps of Architecture: John Ruskin (Br)
Seven Summers: Mulk Raj Anand (Ind)
Sexual Behaviour in the American Male: Alfred Kinsey (US)

Shadow and Act: Ralph Ellisan (US)
Shadow from Ladakh: Bhabani Bhattacharya (Ind)
Shantaram: Gregory David Roberts (Ind-Br)
Shape of Things to Come: H. G. Wells (Br)
She Stoops to Conquer: Oliver Goldsmith (Ir-Br)
Siddharta: Hermann Hesse (Ger)
Silent Spring: Rachel Carson (US)
Six Characters in Search of an Author: Luigi Pirandella (It)
Six Easy Pieces: Richard P. Feynman (US)
Slaughter House Five: Kurt Vonnegut (US)
Small is Beautiful: A study of Economics as if People Mattered: Ernst Schumacher (Ger-Br)
Small Island: Andrea Levy (Br)
Snakes and Ladders: Essays on India: Gita Mehta (Ind-US)
Snow Country: Yasunari Kawabata (Jap)
Sofie's World: Jostein Gaarder (Nor)
Sohrab and Rustam: Mathew Arnald (Br)
Sons of Fortune: Jeffrey Archer (Br)
Sons and Lovers: D. H. Lawrence (Br)
Sophie's Choice: William Styron (US)
Soul and Structure of Governance in India: Jagmohan (Ind)
Spouse: The Truth About Marriage: Shobha De (Ind)
Star: A Novel: Pamela Anderson (US)
Story of My Life: Moshe Dayan (Isr)
Strangers and Brothers: C. P. Snow (Br)
Strife: John Galsworthy (Br)
Stupid White Men: Michael Moore (US)
Sun Stone: Octavia Paz (Mex)
Sunny Days: Sunil Gavaskar (Ind)
Swami and Friends: R. K. Narayan (Ind)

Talisman: Sir Walter Scott (Scot)
Tarzan of the Apes: Edgar Rice Burroughs (US)
Tempest: William Shakespeare (Br)
Tender is the Night: F. Scott Fitzgerald (US)
Tenth Insight: James Redfield (U.S.)
Thank You, Jeeves: P. G. Wodehouse (Br-US)
The Adventures of Sherlock Holmes: Arthur Conan Doyle (Br)
The Affluent Society: John Kenneth Galbraith (US)
The Age of Reason: Jean Paul Sartre (Fr)
The Agenda: Bob Woodward (US)
The Agency and the Ecstasy: Irving Stane (US)

The Alchemist: Paulo Coelho (Bra)
The Algebra of Infinite Justice: Arundhati Roy (Ind)
The Ambassadors: Henry James (US-Br)
The Applecart: George Bernard Shaw (Ir)
The Argumentative Indian: Amartya Sen (Ind)
The Arrangement: Elia Kazan (US)
The Art of Happiness: Dalai Lama (Tib)
& Howard C. Cutler (US)
The Banyan Tree: Hugh Tinker (Br)
The Best and the Brightest: David Halberstam (US)
The Better Man: Anita Nair (Ind)
The Big Fisherman: Lloyd Douglas (US)
The Black Hole: Richard Preston (US)
The Bride's Book of Beauty: Mulk Raj Anand (Ind)
The Bridges of Madison County: R.J. Waller (US)
The Cancer Ward: Alexander Solzhenitsyn (Rus)
The Call of the Wild: Jack London (US)
The Canterbury Tales: Geoffrey Chaucer (Br)
The Captive of the Caucasus: Alexander Pushkin (Rus)
The Cardinal: Henry Morton Robinson (US)
The Caretaker: Harold Pinter (Br)
The Castle: Franz Kafka (Cze)
The Cat and Shakespeare: Raja Rao (Ind)
The Changing World of the Executive: Peter Drucker (US)
The Civil War: Shelby Foote (US)
The Claw: Heinrich Boll (Ger)
The Coup: John Updike (US)
The Court Dancer: Rabindra Nath Tagore (Ind)
The Crucible: Arthur Miller (US)
The Da Vinci Code: Dan Brown (US)
The Day of the Locust: Nathaniel West (US)
The Death of Vishnu: Manil Suri (Ind)
The Degeneration of India: T.N. Seshan (Ind)
The Diary of a Young Girl: Anne Frank (Ger)
The Double Helix: James D. Watson (US)
The End of a Beautiful Era: Joseph Bradsley (Rus-US)
The End of History and the Last Man: Francis Fukuyama (US)
The English Roses: Madanna (It-US)
The Executioner's Song: Norman Mailer (US)
The Eye of the Storm: Patrick White (Austral)
The Far Pavilions: M.M. Kaye (Br)
The Faraway Music: Svetlana Allilueva (Rus-US)

The Feminine Mystique: Betty Friedan (US)
The Fifth Horseman: Larry Collins (US) and
 Dominique Lapierre (Fr)
The Fire Next Time: James Baldwin (US)
The Forbidden Sea: Tara Ali Baig (Ind)
The French Lieutenant's Woman: John Fowles
 (Br)

The Fury: Salman Rushdie (Ind-Br)
*The Future of India: Politics, Economics and
 Governance*: Bimal Jalan (Ind)
The Ginger Man: J.P.
 Donleavy (US)

The Glass Palace: Amitav
 Ghosh (Ind)

The God of Small Things:
 Arundhati Roy (Ind)

The Godfather: Mario Puzo
 (US)

The Golden Gate: Vikram
 Seth (Ind-US)

The Golden Notebook: Doris Lessing (Br)

The Grapes and the Wind: Pablo Neruda (Chi)

The Grapes of Wrath: John Steinbeck (US)

The Great Challenge: Louis Fischer (Fr)

The Great Indian Novel: Shashi Tharoor (Ind)

The Great Unravelling: Paul Krugman (US)

The Green Knight: Iris Murdoch (Br)

The Guns of August: Barbara Tuchman (US)

The Heart of the Matter: Graham Greene (Br)

The Heart is a Lonely Hunter: Carson McCullers
 (US)

The Hitchhiker's Guide to the Galaxy: Douglas
 Adams (Br)

The Homet's Nest: Jimmy Carter (US)

The Horse Whisperer: Nicholas Evans (Br)

*The Horseshoe Table: An Inside View of the UN
 Security Council*: Chinmaya R. Gharekhan
 (Ind)

The Hot Zone: Richard Preston (US)

The House of the Spirits: Isabel Allende (Chi)

The Humboldt Gift: Saul Bellow (US)

The Hungry Tide: Amitav Ghosh (Ind)

The Idiot: Feodor Dostoyevsky (Rus)

The Importance of Being Earnest: Oscar Wilde (Ir)

The Interpreters: Wole Soyinka (Nig)

The Inscrutable Americans: Anurag Mathur
 (Ind)

The Invisible Man: Ralph Ellison (US)

The Joy of Man Kundera (Cze-Fr)
The Judge: Steve Martini (US)
The Judgement: Kuldip Nayar (Ind)



Arundhati Roy

The Keeper of the Keys: Milan Kundera
The Last Song of Dusk: Sidharth Sang
The Last Temptation of Christ: Kazantz
The Legends of Khasak: O.V. Vijayan (I
The Little Prince: Antoine de Saint-Exup
*The Making of a Midsummer Night's
 David Selbourne* (Br)
The Man Without Qualities: Robert Mus
The Mandarin: Simon de Beauvoir (Fr)
The Masters: C. P. Snow (Br)
The Medium is the Massage: Marshall McL
 (Can)
The Men Who Killed Gandhi: Manohar Malgo
 (Ind)
The Merchant of Venice: William Shakespe
 (Br)
The Middle Ground: Margaret Drabble (Br)
The Mind of the C.E.O.: Jeffrey E. Garten (US)
The Miniaturist: Kunal Basu (Ind)
The Minister's Wife: Amaresh Mishra (Ind)
The Miser: Moliere (Fr)
The Moon and Sixpence: W. Somerset Maugham
 (Br)
The Monk Who Sold His Ferrari: Robin S.
 Sharma (Ind-Br)
The Moor's Last Sigh: Salman Rushdie (Ind-Br)
The Namesake: Jhumpa Lahiri (Ind-US)
*The Name of the Rose, The Mysterious Flame of
 Queen Loana*: Umberto Eco (It)
The Narrows: Michael Connelly (US)
The New American Militarism: Ari
 Bacevich (US)
The Night Manager: John le Carré (Br)
The Old Man and the Sea: Ernest Hemin
 (US)
The Origin of Species: Charles Darwin (Br)
The Other Side of Midnight: Sidney Sheldon (B
The Painted Veil: W. Somerset Maugham (B
The Pickwick Papers: Charles Dickens (Br)
The Pilgrim's Progress: John Bunyan (Br)
The Power and the Glory: Graham Greene (B
The Power of Positive Thinking: Norman Vincent Pea
 (US)
The Private Life of Chairman Mao: Dr. Li Zhisu
 (Chi)
The Proper Study of Mankind: Isaiah Berlin (Br)
The Rain King: Saul Bellow (US)
The Rape of the Lock: Alexander Pope (Bri)
The Red Carpet: Bangalore Stories: Lavanya
 Sankaran (Ind)
The Return of the Native: Thomas Hardy (Br)

Wild Swans: Jung Chang (Chin-Br)
Wings of Fire: A.P.J. Abdul Kalam (Ind)
Winning: Jack Welch, Suzy Welch (US)
Winter Solstice: Rosamunde Pilcher (Scot)
Witness to an Era: Frank Moraes (Ind)
Women in Love: D.H. Lawrence (Br)
World Within Worlds: Stephen Spender (Br)
Wuthering Heights: Emily Bronte (Br)

Yayati: V.S. Khandekar (Ind)
Year of the Upheaval: Henry Kissinger (US)
Yesterday and Today: K.P.S. Menon (Ind)
You Can Win: Shiv Khara (Ind)
Zen and the Art of Motorcycle Maintenance:
 Robert Pirsig (US)
Zorba the Greek: Nikos Kazantzakis (GK)

Fifty Great Books

Prof. P. Vijaya Kumar

The Analects (5th century BC) by Confucius.

The thoughts of the great Chinese philosopher and religious teacher Confucius can be found in two sets of books. The first set – *The Five Classics* – are concerned with administration, history, ceremonials and arts. *The Analects* is one of the four books that make up the second set (*Ssu Shu*) all of which are concerned with ethics and philosophy. These gleaned fragments are divided into 20 chapters and cover various aspects like the qualities of a good government, ancient worthies, manners and morals, character and principles, virtue, the responsibilities of rulers and the qualities of his disciples. The wisdom of the ancients should be a source of guidance, Confucius constantly reminds his pupils. The cultivation of uprightness and integrity, the need to build good human relationships and the need to be useful to both society and to the country are emphasised. Confucius, it can be seen, valued rational thinking, egalitarianism and altruistic behaviour. He saw himself as just a teacher transmitting the wisdom of ancient Chinese culture and not as a god or a prophet. Here is a familiar sounding gem from Book XII of *The Analects* – “What you don’t want yourself,

don’t do to others”. Like all great books, the relevance of *The Analects* is timeless.

The Republic (4th century BC) by Plato.

The Republic is the most famous of Plato’s dialogues. The speaker is Socrates and Book I starts with Socrates and his companions talking about old age and happiness and wealth. The discussion turns to justice and the conversation, which appears to be pleasant chit chat about the origin of justice and injustice in society, soon transforms itself into a full-fledged exploration of some of the central questions of philosophy. We find the typical Socratic procedure – a definition is suggested, is refuted and a counter example offered and considered. From Book II Socrates sketches the ideal republic, a place where justice would be available to all. He speaks about the nature of humanity and the social classes one would find in an ideal society. An aristocratic group of philosopher kings, who represented reason, would rule and all citizens would do the work most suited to them. The education that the philosophers would have to be given is described. It would include music, gymnastics, science, mathematics and the study of ideas. Different forms of government are looked at and, in Book X, an

world – from magic to religion to science. In future, science itself might be displaced. An absorbing read, valued today more for its literary qualities than for its insights.

A Room of One's Own (1928) by Virginia Woolf.

There are endless discussions on whether men are superior to women. Male chauvinists gleefully point out that most of the great thinkers, scientists, writers and artists have been men. In this perspicuous and influential book, Woolf counters the chauvinist male by explaining why women have not produced great works of fiction. It is, she demonstrates, primarily because of lack of opportunity. Crushed by demands of family and home women have, through most of history, found it impossible to express themselves creatively. Leisure and means (or in her words “£ 500 a year and a room of one's own”) are needed for women before they can come into their own. If Shakespeare had an equally gifted sister she would never have become a famous playwright. Judith (that is the name Woolf gives this hypothetical sister) would not have been sent to school and, if, like Shakespeare, she had run off to London, instead of fulfilling her artistic potential, Judith would have found herself pregnant and would probably have committed suicide. Circumstances, in other words, make people and now that for the first time in history, the circumstances are right, at least for western women, to achieve greatness they should seize the opportunity, says Woolf. One of the most eloquent books ever against prejudice.

A History of Western Philosophy (1945) by Bertrand Russell.

The 33 chapters that make up this excellent book fall into three main sections: Ancient Philosophy, Catholic Philosophy and Modern Philosophy. Russell's focus is not on individual thinkers alone, but on how philosophy shapes and is shaped by society and culture at large. So he takes great care to sketch the ethos

which gave rise to different schools of philosophy and the political and historical context in which individual philosophers are to be placed. For Russell philosophy, as

opposed to theology,

began in sixth century BC in ancient Greece. It fell into decline when Rome fell. Its second great period was from the eleventh to the fourteenth centuries, a period dominated by the Catholic Church. The third period, from the seventeenth century, is dominated by science. Russell pays as much attention to movements as to individuals who had an impact on philosophy. For instance, there are chapters on Stoicism and the Romantic Movement as there are on Rousseau and Byron. Written with his customary wit, polish, irony and immense erudition the book can be read both for profit and for pleasure. Perhaps the most stylish and readable introduction to Western philosophy there is.

Silent Spring (1962) by Rachel Carson.

“There was once a town in the heart of America where all life seemed to live in harmony with its surroundings.” With this almost fairy tale like beginning Rachel Carson sketched a bleak picture of what man-made chemicals, widely used as pesticide, were doing to the fragile and complex processes that keep nature going. Her education as a marine biologist and her career as a writer-scientist opened her eyes to this lethal dimension of industrial civilisation. She focused on the indiscriminate use of DDT and pointed to research that showed some alarming things about it – almost all animals on earth, even birds in areas as remote as Antarctica, now have some DDT in their flesh. The spread of this and similar man made toxins was doing slow but irreversible damage to the soil,



Bertrand Russell

ers, seas and the green mantle of plants
t support all animal life on earth. She
warned about the genetic deterioration
t synthetic chemicals and man-made
iation were effecting. Pointing out that
history of life on earth has been a history
interaction between living things and
eir surroundings Carson went on to say
at if we served a chemical feast we would
on wake up to springs "when no birds
g". An intelligent and insightful book
m a top science writer.

An Area of Darkness (1964) by V. S. Naipaul.

Naipaul had been born
Trinidad where his
andfather had gone as
indentured labourer.
eland of his forefathers
as, for him, a country
uspended in time, a void,
n "area of darkness". He



V.S. Naipaul

ad been brought up a Hindu but, was by
inclination, a sceptic and indifferent to religion.
Ul that was Hindu in him was a vague sense
of caste and a "horror of the unclean". In his
30s Naipaul set out to learn about the land of
his forefathers. In Bombay, his first stop, he
got a frightening glimpse of what he called
"India's ever receding degrees of degradation"
and was horrified by it. He did not find the rest
of the country any different. Most of the book
is harsh, critical and negative but it not to be
dismissed as a drain inspector's report. Naipaul
mixed travel writing with sharp analysis. He
noted, for instance, how Gandhi, the
revolutionary, had been transformed into a
sham and absorbed into the formless
reality and decayed pragmatism of India.
Turning Gandhi into a god Indians had lost
a message. Naipaul is most scathing about
the people - their manners, attitudes,
greed, callousness, unctuousness and even
appearance. A provocative and thought
provoking book.

Small Is Beautiful (1973) by E F Schumacher.

E F Schumacher, who had been by turns a
farmer, a businessman and an academic,
captured international attention with this
evocatively titled work which "looked at
economics as if people mattered." Schumacher
pointed out that economists suffered from a
kind of metaphysical blindness which made
them assume that their's was a science of
absolute and invariable truths. Their cardinal
error was in treating natural capital as income,
an error for which mankind would have to pay
unless they rectified their economic behaviour.
Schumacher advocated a "Buddhist
economics" the keynotes of which would be
"simplicity and non-violence". An intermediate
technology that made proper use of land and
other resource would, he felt, lay the ground
for a sustainable future. Schumacher is
considered the first holistic thinker of the Green
movement and even today, in an age obsessed
with growth and a mania for high-tech
solutions, his picture of a humane alternative
to rampant capitalism is as relevant, and
persuasive, as when it was first outlined.

The Decline of Nair Dominance (1976) by Robin Jeffrey.

When Vivekananda visited Kerala in the
1890s he famously described it as a Hindu
asylum. Less than a century later it had be-
come a model state. How did this transforma-
tion come about? It is this intriguing question
that is behind Robin Jeffrey's landmark study
The Decline of Nair Dominance. Jeffrey tells
us about the social and political changes Kerala
underwent and shows how a feudal,
matrilineal, caste-ridden society segued into a
modern, democratic, literate state that put in
power the world's first elected communist
government. A careful reading of source mate-
rial and a methodical analysis enables Jeffrey to
paint a picture of change caused by the rise
of a cash economy, western-style
improved transport and commu-

the setting up of a British-inspired system of law. It is also the story of how the Nairs, who fitted in perfectly with Louis Dumont's definition of a "dominant caste", were brought down from their position of comfortable superiority over other castes to having to compete with them. Thirty years after its first publication this book still is the most astute and readable study of social change in Kerala.

Russian Thinkers (1978) by Isaiah Berlin.

This collection of seven essays by the political philosopher and historian of ideas Isaiah Berlin includes his celebrated piece 'The Hedgehog and the Fox'. For Berlin the hedgehog is a metaphor for those writers who relate everything they do and say to a central vision, while foxes stand for those whose vision is plural and contradictory. Though reductive and simplistic, Berlin felt that this categorisation was a handy way of grouping and understanding writers. Tolstoy was, for Berlin, a fox, while Dostoevsky was the quintessential hedgehog. The other essays in the volume include one on the birth of the Russian intelligentsia, the influence of German romanticism on Russian thinkers, the impact of the 1848 revolts in France on Russia and on individual Russian thinkers like Alexander Herzen, Vissarion Belinsky and Mikhail Bakunin. To each Berlin brings his characteristic clarity and profundity. For those who love ideas, every essay is a treat. The ideas themselves are significant because, as Berlin clearly shows, they still animate our intellectual world.

Life on Earth (1979) by David Attenborough.

This is one of the early books of one of the planet's most famous documentary makers on natural history. It presents a fascinating picture of animals; how they live, find their food, defend themselves, court and fit in with the rest of the natural world and also on the role they have played in shaping the history

of life on the planet. Attenborough warns us that readers risk imagining an appearance of purpose on the animal kingdom that does not exist in reality. Millions of species have become extinct and Attenborough tries to enlighten us about their roles by looking at their present day descendants. The last of the 13 chapters - 'The Compulsive Communicator' - is on man. Attenborough's extraordinary ability to make connections will hold the reader spellbound. An example: he describes the feather, the most distinguishing feature of a bird, and then shows how the same material forms a reptile's scales and our own nails.

The Moronic Inferno (1980) by Martin Amis.

This is a collection of 26 witty and perceptive essays on the USA which, in a metaphor he borrowed from Saul Bellow, Martin Amis calls "the moronic inferno". America has always excited and frightened him, says Amis, and he thinks it is a place one must understand if one is to understand the modern world. With a keen and observant eye and a fine turn of phrase Amis sketches the weirdness and wildness of America. He has chapters on writers like Bellow, Truman Capote, Norman Mailer and John Updike. There is one on the pioneering feminist Gloria Steinem and another on a meeting with Hugh Hefner the publisher of Playboy magazine. He looks at the violence that was endemic in America in the 1980s as well as the impact of AIDS on society. Amis notes that the moronic inferno is not just a metaphor for America today. It is a metaphor for human infamy, "mass, gross, ever-distressing human infamy" which he thinks is both global and eternal. Amis contemplates the frightening possibility that soon every country will become like America. Then the moronic inferno will cease to be a metaphor and will become a reality; probably the only reality. That might be a bleak message but the book is an exhilarating read.

Cosmos (1980) by Carl Sagan.

One of the things that has most fascinated mankind at all times has been the shape and nature of the universe he inhabits. Most creation myths have tried to solve this riddle. At the opening of *Cosmos* Sagan tells us that "we have discovered a powerful and elegant way to understand the universe, a method called science; it has revealed a universe so ancient and so vast that human affairs seem at first sight to be of little consequence." But science also says that we are a part of this cosmos and that our fate is connected with it. It is this cosmic perspective that Carl Sagan investigates in *Cosmos*. He discovers the grandeur of the universe and the grandeur of our attempt to understand it. In the last tenth of a percent of the lifetime of our species we've acquired the knowledge to understand and describe the earth and also to destroy the earth and extinguish mankind. Never was there greater need for wisdom and Sagan concludes the book with a stocktaking and a deep at our uncertain future. Children, and the child in adults, will find this book most engrossing.

The Inner World (1981) by Sudhir Kakar.

This book is a praiseworthy attempt to understand the Indian psyche by examining the individual, social, cultural and historical dimensions involved in shaping it. There is an emphasis on individual psychological development, understandable since Kakar is a practising psychiatrist. He pays attention to the network of social rules, traditional values, caste customs and kinship regulations involved in creating a sense of identity. His approach is eclectic and he uses the findings and ideas from anthropological accounts, sociological studies, folk tales, mythology, historical reflections and his own clinical impressions. Pointing out that psyche and culture mutually reinforce each other Kakar gives special importance to the analysis of clinical evidence and interpretation of myths. He fears

that Indian culture will soon find itself entrapped in a field of critical environmental stresses and is unsure how it will cope. But Kakar ends with a positive message: the traditional Indian identity elaborated in the book can evolve in such a way that both its historical continuity and its integration with a changing environment are maintained. A fine, unparalleled, attempt to understand the Indianness of Indians.

Spin and Other Turns (1994) by Ramachandra Guha.

Some sections of India's intelligentsia look down on cricket as a vestige of colonialism. Other sections champion hockey and football. But it is a fact that Indians play this quaint and fascinating game with aplomb and that India is one of the world's cricket superpowers. Few have written on Indian cricket with the intelligence, knowledge, insight, and charm of Ramachandra Guha. He brings to bear on his analysis of cricket the erudition and meticulousness of a professional historian and sociologist and the love of a practitioner and fan. *Spin and Other Turns* is about Indian cricket in the 1970s, when it really came of age. This was when India defeated both the West Indies and England away from home and thus laid the foundation for her triumph at the World Cup in 1983. Guha identifies two great traditions of Indian cricket — the art of slow bowling and the Bombay school of batsmanship. Sections are devoted to "the Holy Trinity" of Bedi, Prasanna and Chandrasekhar and also to the first great Indian spinner — Palwankar Baloo, a dalit who was held as a model by B R Ambedkar. Among the batsmen Guha devotes space to are Gavaskar, Merchant and G R Viswanath. A delightful book.

My Own Country (1994) by Abraham Varghese.

The book opens with a dramatic of a young man returning home to town of Johnson City, Tennessee fr

York, where he had been working. The man is critically ill and soon dies. This is the first death of AIDS in Johnson City. But soon, the city and Dr Varghese, the infectious disease specialist in Johnson City, have to take care of other patients with AIDS. The experience transforms Varghese, who, like so many others of the Indian diaspora, was looking for a place he could call home; for "his own country". Born and educated in Ethiopia, Varghese had earned his medical degree from Madras Medical College and found his American experience nurturing both professionally and personally. But nothing had prepared him, or Johnson City, for the devastation AIDS was to wreak. As Varghese narrates the story of his doomed patients we learn about illness, courage, compassion, prejudice, hope, mortality, love, yearning, greed, renunciation, pain and even the good life. Against this larger background Varghese softly weaves in the touching story of the falling apart of his personal life. Varghese's unique status as an exile helped him empathise with his ostracised patients and his exceptional narrative skill and graceful prose make *My Own Country* a beautiful and healing work. In many ways it tells a sad story, but our understanding of disease and death, of AIDS and its dreadful power and, therefore, of the 20th century itself, would not be complete without this masterly narrative.

Gandhi (1997) by Bhikhu Parekh

Bhiku Parekh's slim volume is no hagiography but an intelligent assessment of the thoughts and deeds of one of the greatest men who ever lived. It begins with a brief look at Gandhi's life and work. Parekh then turns to Gandhi's thoughts on religion, politics, human nature and his concept of ahimsa. Gandhi's vision of a non-violent world and his weighty critique of modernity are then examined. The link between Gandhi's life and his actions and his constant, courageous quest for truth and his obsessive attempts to

live by his principles are described. Parekh is even handed and identifies Gandhi's limitations as well. His failure to appreciate science and modernity, his imperfect understanding of how societies function and how evil can transform the world, his utopian ideas on economics, his insensitivity to art, history, nature etc are all ascribed not to lack of intellectual curiosity but Gandhi's intensely moralistic vision of life. It was a vision that prevented him from having interests other than the full time care of his soul and the interests of his countrymen. Lord Parekh's book is the perfect introduction to Gandhi, the man and his ideas.

The Adversary (2000) by Emmanuel Carrere

How many lies can a man tell?

On January 9, 2003 Jean-Claude Ramond's house, in northern France, burned down killing his wife and two children. He himself barely managed to survive. Ramond, a pillar of the local community, was a respected researcher and doctor who had been working in a WHO lab in nearby Geneva. The same day his parents, and their dog, were found dead at their home fifty miles away. Police investigations soon showed that this was no tragic coincidence. Ramond himself had killed his parents, then his wife and children and then set fire to his house. Police also found that Ramond had been leading a double life for over two decades. He was no doctor. Indeed he had not even finished his medical education. He drove to "work" every day but spent his time in parks and libraries. He borrowed money from relatives and friends promising to invest them in high interest yielding schemes available to him as a WHO professional. Finally, when it was clear his lies would catch up with him, he sought a way out through murder. Emmanuel Carrere, one of France's most critically acclaimed writers, in a gripping narrative, tells us this true story of monstrous deception. But even he has no explanation

why Raymond acted as he did. That explains the title. The adversary is one of the pseudonyms for the devil.

How many lies can a man tell? Many, but not an endless number.

On Literature (2002) by Umberto Eco.

Knowledge, Eco suggests, is of two kinds —that which tells you about the outside world and that which wins you promotions at universities. Umberto Eco, novelist, intellectual, cultural critic, medievalist, scholar and professor of semiotics at the oldest university in the world (University of Bologna) has a passionate concern for real knowledge and a canny sense of how difficult it is to attain it. His writings are full of remarkable insights into life and literature. This volume is as engrossing as any of his other works of non-fiction as, with charm and wit, he looks at the world of writers and writing. He brings great clarity to a variety of subjects including the nature of prose and poetry, on why we read and why some people write, on America and anti-Americanism, on tragedy, the detective story, irony and metaphor, symbolism, paradox, computers and literature, history, post modernism, conspiracy theories and on how he writes his novels. The best of the lot is perhaps the erudite yet playful piece titled 'The Power of Falsehood'.

How to Be Alone (2002) by Jonathan Franzen

The essays in this volume celebrate being a reader and a writer. Franzen is aghast at the amount of outrageousness being manufactured in the USA and at a world where the voices of self and commerce are drowning out all other voices. He sets out to address the problem of preserving individuality and complexity in a noisy and distracting mass culture. That, for Franzen, is the problem of how to be alone. He thinks the problem is related to the act of reading, for reading sparks the imagination unlike use of other types of media like television or multimedia.

The decline of reading is not just a shift in our change of entertainment but, Franzen suspects, a transformation of the very nature of humanity. In the contemporary world, we have "instead of a soul, membership in a crowd" and "instead of wisdom, data." Essays on the postal system and new prisons, written with humour and charm, demonstrate how the civic has become the commercial. In "Meet me in St Louis" Franzen explains why he declined to be on Oprah Winfrey's Book Club, an act that earned him much public opprobrium. It was, for Franzen, as much about preserving his dignity as about the bogusness and superficiality of TV. An elegant, clear eyed and wise book.

The Emerging Mind (2003) by Vilayanur Ramachandran

The five essays in this volume (originally the 2003 Reith Lectures) were written with the intention of making neuroscience and psychophysics more accessible to a broad audience. In the first 'Phantoms in the Brain' Ramachandran looks at some rare neurological syndromes and demonstrates how it is possible to learn about the working of the normal brain from these neurological oddities. The second 'Seeing is Believing' is on the role of "mirror neurons" in the evolution of culture. The third 'The Artful Brain' is on neuroaesthetics and here he spells out his "10 universal laws of art". The fourth essay 'Purple Numbers and Sharp Cheese' is on synesthesia as sensory phenomenon whose neural basis can be discovered in the brain and which can help us understand metaphor and the evolution of language. The last 'Neuroscience' the new philosophy' is on mental illness and Ramachandran's hope for the future of his subject. The essays, when read with the copious footnotes that accompany them, could be an eye opener.

Occidentalism (2004) by Ian Buruma and Avishai Margalit

Edward Said's 'Orientalism' was such a

phenomenonal success that most of its contentions went unchallenged and are today accepted as facts. But prejudices and stereotyping are not just characteristic of the Western view of the East. They also mark the Oriental views of the West and are, like the white man's prejudices, based on ignorance, misunderstanding and stupidity. In six brief but cogently argued essays Ian Buruma and Avishai Margalit look at the origins of Occidentalism, or the Eastern view that the West is decadent and dehumanising. They discover that the roots of the hatred of the West lie in the West itself. Many of the ideas that inform Occidentalism came from the German and Russian reactions to the Enlightenment; some, like the myth of the sinful city and the martyr cult that saw liberal democratic societies as weak and corrupt and anti-heroic, have more ancient roots. In other words, the roots of 9/11 lie deep in the past and in Europe itself. An eye-opener.

The Arthashastra (between 3rd century BC and 2nd century AD) by Kautilya

This is the mother of all treatises on economics and politics and statecraft. For Kautilya "arthashastra" is "the science of wealth and welfare". Kautilya destroyed the weak Nanda dynasty and installed Chandragupta Maurya on the throne of Magadha. He believed that, using the principles set out in his treatise, it was possible to set up an ideal kingdom. *The Arthashastra* is an incredibly detailed guide in 15 chapters. The topics dealt with include the branches of knowledge, the constituents of the state and the threat to them, the duties of a king, revolts, rebellions, conspiracies, treason, the bureaucracy, revenue, duties of different officials, punishment of corrupt officials, all aspects of the legal system, occult practices, covert operations, foreign policy and war. Behind the apparent cynicism lay the desire to ensure the welfare of his people; a good king had to maintain law and order and run an efficient administrative machinery.

A Brief History of Time (1988) by Stephen Hawking

Theoretical physics, and the mathematics needed to understand it, seemed outside the ken of most people. Stephen Hawking decided to present, without any mathematics or formulae, a picture of the universe that intelligent laymen could grasp. The result was the surprising bestseller *A Brief History of Time*. Hawking begins with the premise that the universe is governed by natural laws that we can discover and understand. There are chapters on space and time, the expanding universe, the uncertainty principle, the forces of nature (especially gravity), elementary particles, black holes and the origin and fate of the universe. The book also contains a glossary and portraits of Galileo, Newton and Einstein. In a moving conclusion Hawking expresses the hope that soon it might be possible to unify the laws of physics. If that happens we will have discovered a complete theory of the universe or, in Hawking's words, "know the mind of God".

The Poverty of Historicism (1957) by Karl Popper

Popper uses "historicism" to mean the belief that historical events are governed by laws. He thought that such a faith in the inexorable laws of historical destiny had led, in the 20th century, to the rise of both fascist and totalitarian states which had, in the name of progress, killed millions. Popper refuted historicism by pointing out that the course of human history was strongly influenced by the growth of human knowledge. He pointed out that it is impossible to predict the growth of scientific knowledge and so, he reasoned, it is not possible to predict the future of human history. Historicism rose out of a mistaken understanding of the methods of the natural sciences and represented a misguided effort to copy these methods. Popper, acclaimed for his anti-authoritarian social and political philosophy, examined the roots of these be-

lief in his two volume classic *The Open Society and Its Enemies*.

Meditations (167 AD) by Marcus Aurelius

Marcus Aurelius became the emperor of Rome in A D 138, at 17. It was an unhappy reign, troubled by rebellion, natural disasters and war. *Meditations* is a set of earnest jottings he made. The first book is on himself. In it he considered what he had learned from others. The rest of the 12 books are in the form of musings about a number of subjects and earnest exhortations to himself. He thought it important to understand the nature of the world and his part in it. He considered the fleeting nature of time, the soul, the judicious use of one's time on earth, God, the good life, duty, justice and other topics. Self-discipline and temperance and a calm acceptance of the inevitability of death, he believed, could give one peace of mind. All his thoughts are marked by moderation, gentleness and the stoicism for which he was famous.

The Life of Samuel Johnson (1791) by James Boswell

Dr Samuel Johnson was the most famous intellectual and man of letters of his time. James Boswell, an admirer of Dr Johnson and a writer of no mean ability himself, set himself the task of writing a definitive biography of his hero. The result was what was considered the greatest biography of all time. Apart from recording the details of Dr Johnson's life, Boswell also painted a detailed picture of several other luminaries of the time, like Sir Joshua Reynolds, the painter, David Garrick the actor, Burke the orator, and Oliver Goldsmith, the writer. Long conversations on art and philosophy are recorded as are a number of letters written to and by Johnson. The result is an unrivalled portrait of an age, when people spoke much and were outspoken and the notion of political correctness did not exist, and a model biography.

The Varieties of Religious Experience (1902) by William James

James offers a psychological view of religion in the 20 essays of this book. He examines personal religious beliefs, not organised religions. He is struck by the fact that the unseen world, which is psychologically important to the subject who experiences it, is more powerful than the material world. He then looks at how optimistic and pessimistic people respond to religious experience. The "completest" religions are those in which the pessimistic elements are best developed. The best of these are Buddhism and Christianity. James then examines the conflicts experienced by the "twice born" or sick souls and looks at the phenomenon of moral conversion among believers. He then turns to saintliness, its qualities and usefulness. Before concluding James also looks at mysticism and the relationship between philosophy and religious experience. At a time when thinkers were declaring religion dead James's masterly study explained why humans would always be religious.

The Decline and Fall of the Roman Empire (1776 – 1788) by Edward Gibbon

This is a grand history of Rome, from 180, when Marcus Aurelius's reign ended, to 1590, when Constantinople fell. In clear and sonorous prose Gibbon narrated the story of the fall of one of the greatest empires the world had seen and of which he was an admirer. Gibbon identified four reasons for the ruin of Rome: natural calamities; the hostile attacks of the barbarians from the North and the hostility of Christians within the empire; the abuse of the material wealth of Rome and the domestic quarrels of the Romans. The work is characteristic of the Enlightenment of which Gibbon was a representative and reflects his anti-clerical and rational inclinations. His use of carefully footnoted sources makes him one of the first modern historians, while the magnificence of his theme and style make this

work one of the greatest literary works of all time.

The Argumentative Indian (2005) by Amartya Sen

It is a blinkered view of history, argues Sen, which makes us assume that democracy and



Amartya Sen

secularism, and also ideas like tolerance and those of science, are imports from the West. Sen shows that the tradition of debate and dissent, pluralism and heterodoxy has informed India from the early days of her history.

It is because India has such a rich argumentative tradition that Westminster style parliamentary democracy took roots in India so easily, while it failed in most countries which were also subject to British colonialism. This collection of essays also has wonderful pieces on Indian calendars, the relationship between India and China and India and the nuclear bomb. This book will help every Indian understand the history of our land, the components of its culture and the sources of or sense of identity. Sen shows how India, with its rich intellectual and artistic tradition was always shining.

The Selfish Gene (1976) by Richard Dawkins

Dawkins believed that Darwin was the first thinker to put together a coherent and tenable account of why we exist. In *The Selfish Gene* he set out to examine one aspect of evolutionary theory – the biology of selfishness and altruism. His argument is that as animals we are all machines created by our genes. Our genes themselves are the fundamental units of selection and to be successful a gene has to be ruthlessly selfish. But genes survive by fostering a form of altruism at the level of individual animals. To understand the evolution of modern man we must throw out the gene as the sole basis of evolution. Cul-

ture is spread through a new replicator the “meme”. Memes are, like genes, blind but Dawkins insists that our conscious foresight could save us for the worst excesses of these blind replicators. Nice guys, he says, can finish first.

The Interpretation of Dreams (1900) by Sigmund Freud

As a doctor searching for a cure for his neurotic patients Freud discovered the unconscious. He believed that this irrational, chaotic and unknowable part of our mind – the unconscious – dictated how we behaved. In *Dreams*, he theorised, gave a therapist access to this world and the conflicts that lay there. A patient could be cured if his conscious mind could be made aware of the nature of the conflict tearing it apart. Freud did not cure many patients this way, but the “talking cure” and the book that introduced these ideas to the public, gained immense popularity. In individual chapters he looked at the method of dream interpretation, dreams as wish-fulfillments, the source of dreams and the psychology of dream processes. The ideas in the book shaped the way men saw themselves and so this book is considered one of the seminal works of the 20th century.



Sigmund Freud

The Uses of Literacy (1957) by Richard Hoggart

“Work is the curse of the drinking classes” said Oscar Wilde. The image of the working classes as lazy, criminally inclined and liquor loving is an old and widespread one. Hoggart, in *The Uses of Literacy* tried to find out what real working class culture was like. He studied their reading and listening habits and came up with a fascinating and detailed picture of working life and culture. He found that they were a gregarious and warm people whose

lives were built on the twin values of love and work. Their sense of independence and loyalty to their class is reinforced by their division of the world into 'Them' and 'Us'. The second half of the book is a less than happy look at how organised commercial interests and the mass media were corrupting authentic working class culture. One of the classics of cultural studies.

The Greatest Benefit to Mankind

(1997) by Roy Porter

With 22 chapters, 24 pages of plates, 46 pages of "further reading" and a 66 page index this is a thorough look at the medical history of humanity from antiquity to the present. A finely balanced and neutral tone is maintained throughout and the charge of ethnocentricity deftly avoided with chapters on Chinese, Indian and other systems of medicine. The information packed and readable account is the story of a million small steps taken to take modern medicine to where it currently is – its standing is high but also highly contested. Never has it achieved so much or attracted such great suspicion. Today medicine is a profitable source of business for lawyers, accountants and other expensive professions parasitical upon medicine. Its future, concludes Porter, is unforeseeable because the evolutionary battle between microbes and man is itself unpredictable.

Guns, Germs and Steel (1997) by Jared Diamond

When a hunter-gatherer from New Guinea asked Diamond why some parts of the world were so advanced while others were primitive he decided to find the answer for himself. Pushing back the chain of historical causation as far as possible Diamond discovered that the answers came from geography. Patterns of history and the current state of the world can be explained by understanding environmental and geographical conditions. These conditions include the availability of plants and animals that could be domesticated,

which led to agriculture which in turn led to the development of technology. The east-west axis of land mass led to evolution and growth while the north-south axis and the environmental variation it provided meant stagnation. Diamond is careful not to make a claim without some scientific backing for it. He ends the book with an invigorating chapter on the future of human history as a science.

The Beauty Myth (1991) by Naomi Wolf.

The cause of women's liberation, after several decades of progress, might soon be wrecked on the rock of concern with women's "beauty"; such things as "physical appearance, bodies, faces, hair, clothes." Women in the West are now worse off than their grandmothers because they are now weighed down by notions of beauty. The use of images of female beauty against women is a political backlash against feminism, feels Wolf. Myths of motherhood, domesticity, chastity and passivity were used to control women. Those forms of social coercion have been replaced by the ideology of beauty. Every gain made by feminism is being undermined by the beauty myth. Wolf's most spirited chapters are on anorexia and cosmetic surgery. Wolf ends the book with a call for a third wave of feminism.

Outcaste (2002) by Narendra Jadhav

This moving and inspirational book narrates the story of four generations of the Jadhavs. Damu and Sonu, the author's parents, had fled their ancestral village of Ozar in Maharashtra and sought refuge, and employment, in Bombay. Living in chawls and workers' quarters the two raised a family of six kids who became successful; Narendra got a Ph D from the US and became head of the economics research wing of the RBI, and his siblings entered the IAS. The struggles of Damu and Sonu and the iniquities of the caste system are described vividly but without rancour and hatred. Parallel to the narra-

tion of the story of the Jadhavs is the rousing tale of the transformation of the lives of dalits brought about by Dr B R Ambedkar's exhortation to educate, organise and struggle. *Outcaste* is artfully written and an important contribution to understanding the social changes India witnessed in the 20th century.

Nature's Numbers (1995) by Ian Stewart

What can mathematics tell us about the universe? A great deal, it would appear. In this lucid and beguiling account Stewart shows how mathematics can be a tool to discover and describe order and pattern in the universe. The natural world is full of patterns. Examples include the structure of an atom, the number of petals in a flower, the patterns on the sand dune in a desert, the shape of a droplet, the shape of the galaxies and the universe itself. Sections are devoted to the great astronomical discoveries, Fibonacci's series, chaos theory, the butterfly effect and other such apparently esoteric stuff. Stewart makes all these accessible to even those with non-mathematical minds. Nature is both about rigid laws and flexible change and the science of mathematics will help us understand both.

White Mughals (2002) by William Dalrymple

From 1797 to 1805 James Kirkpatrick was the British Resident at Hyderabad. Here he adopted Indian ways, fell in love with and married the great niece of the diwan. His wife, Khair un-Nissa, was only 14 and their love affair was a scandal that threatened to derail the relationship between the British and Hyderabad. James's conversion to Islam and his pro-India ways were not always approved by his superiors even when his services as a diplomat were valued. In 1805 he sent his two children to England to be educated but himself died in Calcutta. Khair travelled to Calcutta to visit his grave.

She never saw her children again and died in Hyderabad in 1813. Apart from the great appeal of this story, what makes Dalrymple's work unique is the insight he provides into the mixture of cultures that goes against all notions of the East and the West being irreconcilably different.

Consilience (1998) by Edward O Wilson

E O Wilson coined the word "bio-diversity", is the father of sociobiology and one of the greatest zoologists in the world. When young he dreamt of the unification of learning. His boldest attempt to bring about such a unification is *Consilience*. Consilience is the "linking of facts and fact-based theory across disciplines to create a common groundwork of explanation." This idea goes back to the Enlightenment and implies that the universe is orderly and can be understood by a small number of natural laws. It is not only the sciences that Wilson hoped to unify, but the social sciences and even the humanities. There are chapters devoted to the mind, genes and culture, the social sciences, the arts and ethics and religion. He concludes that "all tangible phenomena, from the birth of the stars to the workings of social institutions, are based on material processes that are ultimately reducible ... to the laws of physics."

Chasing the Monsoon (1991) by Alexander Frater

This humorous and very readable narrative begins with a chapter on Frater's childhood in Micronesia and his fascination with the rains. A chance encounter in London reminds him of the Indian monsoon and, spurred by his father's unrealised ambition of visiting Chirapunji during the rains, he decides to "chase" it. He meets it at Trivandrum and follows it to Cochin, Goa, Bombay, Delhi, Calcutta and, finally, Chirapunji. The book is filled with anecdote, history, the physics of the weather and genial observations on India and her people. Chirapunji was out of bounds to foreigners and, though not hopeful of

success, Frater applied for special permission to visit it. Frequent references to the progress of his application though the bureaucratic pipelines of Delhi lend some tension to the book and the narrative climax is reached with a visit to a wet and hostile Chirapunji.

The End of History and the Last Man (1992) by Francis Fukuyama

Fukuyama says that history as an evolutionary process has come to an end i.e., one cannot conceive of a better system of government than liberal democracies of the West, though much of the world is still "living in history". The idea of a Universal History was first proposed by Kant and later taken up by Hegel. Scientific knowledge is what lends history directionality. Now that science has been discovered, there will be no forgetting or going back and its political, economic and social consequences—liberal democracy, capitalism and a society defined by technology—are inevitable. Fukuyama rejects the Marxist view of history and examines the ideas of Hegel, Hobbes and Locke. Man's need for recognition (thymos) is a strong driving force and since the only political system that satisfies it is democracy, Fukuyama concludes that capitalist, liberal democracy is the way of the future. Provocative but cogently argued.

The Language Instinct (1994) by Stephen Pinker

Understanding language, Pinker thinks, is the key to understanding human nature and he deploys the tools of cognitive science to do so. Language is not a cultural artefact, but a biological adaptation to communicate information—an instinct to acquire an art. Pinker rejects a number of traditional notions about language and learning. He shows that languages do not shape the way we think or even make thinking possible, that grammar does not have to be taught to children, that the language instinct is the same in most people and that it is distinct from the ability to process information. Some of his ideas come

from Chomsky and there is a lucid explanation of these in one chapter. There are also chapters on language families, phonetics, structure and grammar, the misplaced notions of "correct English" and the false claims that chimps had been taught language. A witty introduction to linguistics.

The Story of My Experiments with Truth (1927-1929) by M K Gandhi

Gandhi was not writing a Western style autobiography, he said, but telling the story of his experiments with truth. He saw his life as consist-



Mahatma Gandhi

ing of these experiments and believed that his readers would also be interested in them. All his experiments were spiritual for he saw morality or spirituality as the essence of religion and his aim was to achieve self-realization. The book, divided into five parts, is chronologically arranged and methodically narrated. In 147 small chapters, they tell the story of Gandhi's life from his birth to the Nagpur session of the Congress. Whether writing about his almost ridiculously small number of "sins" or satyagraha or the agitations he participated in or his experiences in Europe and South Africa or his diet or ahimsa or celibacy or "other principles of conduct believed to be distinct from truth" his quest was always for the truth and his narration deeply engaging.

Prophets Facing Backward (2004) by Meera Nanda

This robust defence of Enlightenment values examines the role of the religious right in India and how post-modernism has skewed people's ideas of science. The schizophrenia of those Indians who have embraced a dangerous form of "reactionary modernism", and embrace technology without accepting the modernization or secularization of cul-

tural categories that should accompany it, is responsible for this sorry state of affairs. The dangerous relativism accepted by postmodernists feeds the fascist and chauvinistic ideology of the Hindutva brigade. Passionate yet cogent Nanda calls for a resumption of the Enlightenment quest. These traditions are not alien to India. The Buddha's teachings pointed to the suppressed traditions within Indian culture that value naturalism and empiricism over the metaphysical flights of Vedantic Hinduism. Amedkar's call for a scientific temper and a democratic ethos is a restatement of this tradition. A critique of Indian intellectuals and a powerful plea for egalitarianism, rationalism and humanism.

Manifesto of the Communist Party
(1848) by K. Marx and F. Engels

"A spectre is haunting Europe – the spectre of Communism." So begins the most famous of all political essays. The first section "Bourgeois and Proletarians" declares that all history is the history of class struggles. Oppressor and oppressed have always fought each other and new classes and alignments have risen. The modern bourgeois society that has arisen on the ruins of feudal society has created new conditions of oppression. The working class create wealth, but the profit goes to the capitalist. The proletariat, or new working class, have to seize power from the bourgeoisie to bring about a worker's paradise. Central to the manifesto is the idea that private property has to be abolished. There is a section on the relationship of Communists to proletarians and another on the position of the Communists and other opposition parties. The thesis might be flawed but for sheer rhetorical power the *Manifesto* is unrivalled.

The Autobiography of an Unknown Indian (1951) by Nirad Chaudhuri

If one of the marks of an intellectual is to

take positions that others would not, Cahudhuri is one of India's leading thinkers. He dedicated his autobiography to the British empire because "all that was good and living within us was made, shaped, and quickened by the ... British rule." The four sections that make up this volume are on his childhood, his first twelve years, his education and his struggle to build a career as a writer. But their chief interest is in the panoramic view they present of India between 1897 and 1921. The book closes with an essay on Indian history where he outlined his theory that Indian culture has bloomed only when she had mixed with some foreign culture. This book and the sequel, *Thy Hand, Great Anarch*, show him to be a profound scholar, a forceful writer and an unorthodox thinker.

Orientalism (1978) by Edward Said

Few recent books on culture have had the impact of Edward Said's *Orientalism*. Making use of Michel Foucault's notion of a discourse, Said looks at Orientalism as a Western style for dominating, restructuring and having authority over the Orient. In post-Enlightenment Europe a systematic discipline was set up by which European culture was able to produce and manage the Orient. The act of description itself is, Said avers, an exercise in power. Europe gained in strength and identity by setting itself off against the Orient. Orientalism became an academic tradition and a habit and made every European narrowly ethnocentric, racist and imperialist. Early in the book Said examines Orientalism in the light of British and French experience of Islam and Arabia. Another chapter looks at 19th century writers, like Marx and Renan and Flaubert, and their role in consolidating Orientalism. The book closes with a look at how latent and manifest Orientalism operate now. This angry polemic against Western prejudice won Said an immense following and raised him to the position of the chief spokesman of the third world in America.

World Cinema: 100 Great Movies

Prof. Joseph Mathew, Palai

Great films can't be measured scientifically because greatness is extremely subjective. Over a long period of time film critics, reviewers and fans are making lists of best films, great films and favourite films.

In this selection of 100 great films of World Cinema, 50% are from Hollywood (American productions). The remaining films are from other countries like Great Britain, France, Italy, Sweden, Poland, Japan and so on. Some are classics, masterpieces, Award winners and even Box-office super hits. These films have the power to entertain, enchant, inform and move us emotionally and change our perception of things. Silent movies are omitted in this selection.

Also Indian movies were not considered in this list.

The Adventures of Robin Hood

(1938) USA 105 mins **Director:** Michael Curtiz and William Keighley **Cast:** Errol Flynn, Olivia de Havilland, Basil Rathbone, Claude Rains, Melville Cooper, Ian Hunter, Alan Hale, Eugene Pallette.

The first technicolored version of the Robin Hood legend. This classic presents Errol Flynn at his swashbuckling best. This good natured, extravagant adventure epic still packs romance, comedy, great sword play action, music and colorful characters. Winner of Three Academy awards.

All About Eve

(1950) USA 138 mins **Director:** Joseph L. Mankiewicz **Cast:** Bette Davis, Anne Baxter, George Sanders, Hugh Marlowe, Marilyn Monroe, Thelma Ritter, Celeste Holm.



The behind-the-scenes world of the Broadway theatre is the subject of this classic. The cynical and witty screenplay features full blooded characters. Its narrative structure continues to inspire back stage dramas. Winner of Six Academy awards.

The African Queen

(1951) USA 106 mins **Director:** John Huston **Cast:** Humphrey Bogart, Katharine Hepburn, Robert Morley, Theodore Bikel, Peter Bull.

Set in German East Africa at the beginning of World War I this magnificent comedy tells the tale of an unlikely romance between a hard-drinking middle-aged mail boat skipper and a priggish spinster missionary. Academy award for best actor to Humphrey Bogart.

An American in Paris

(1951) USA 113 mins **Director:** Vincente Minnelli **Cast:** Gene Kelly, Leslie Caron, Nina Foch, Oscar Levant, Georges Guetary.

This delightful Hollywood fantasy with its romantic vision of Paris was shot entirely on the MGM studio lot. With lavish sets and costumes and a superlative cast, it is a superb movie entertainment. One of the most celebrated musicals of 1950s. Winner of Six Academy awards.

Ashes And Diamonds

(1958) Poland 102 mins **Director:** Andrzej Wajda **Cast:** Zbigniew Cybulski

The chief character is a Polish partisan who is unable to understand why the killing must continue after World War II is over. The film is the clearest expression of Wajda's fascination with the bitter aftermath of war and the intellectual contradictions war creates.

Aguirre, The Wrath of God

(1972) Germany, Mexico, Peru 93 mins **Director:** Werner Herzog **Cast:** Klaus Kinski, Rojo, Ruy Guerra, Del Negro, Peter Be

This epic historical drama is the story

expedition of the Spanish conquistador Gonzalo Pizarro in the impenetrable jungles of Peru. In his mad pursuit for riches, Pizarro orders a party to scout ahead for signs of El Dorado. Wading through the treacherous waters by a raft, the explorers are besieged by hostile natives, disease and starvation. Crazy with greed and mad with power Aguirre takes over the enterprise slaughtering any one who opposes him. Nature and Aguirre's unquenchable thirst for glory ultimately render him insane, in charge of nothing but a raft of corpses and chattering monkeys.

Amarcord (1974) Italy/France 123 mins
Director: Federico Fellini **Cast:** Puppella Maggio, Magali Noel, Armando Brancia, Ciccio Ingrassia, Luigi Rossi, Nandino Orfei, Bruno Zanin
 This landmark film is based on director Fellini's reflections of his youth in a small town in prewar Italy. Winner of Academy award for Best foreign language film.

All The President's Men (1976)
 USA 135 mins **Director:** Alan J. Pakula **Cast:** Dustin Hoffman, Robert Redford, Jack Warden, Martin Balsam, Jason Robards, Jane Alexander, Hal Holbrook, Meredith Baxter.

The Watergate scandal - as exposed by Washington Post reporters Bob Woodward and Carl Bernstein meticulously transferred to the screen by Alan Pakula and proving that politics, providing they are sensational enough, can be both a critical and box-office success. Winner of Four Academy awards.

Annie Hall (1977) USA 94 mins **Director:** Woody Allen **Cast:** Woody Allen, Diane Keaton, Tony Roberts, Shelley Duvall, Carol Kane, Paul Simon.

Autobiographical urban romantic comedy by Woody Allen following the up down relationship between a neurotic night club comedian and a young midwestern singer who meet, fall in love, quarrel and finally break up. Winner of Four Academy awards.

Apocalypse Now (1979) USA 153 mins **Director:** Francis Ford Coppola **Cast:**

Marlon Brando, Robert Duvall, Martin Sheen, Frederic Forrest, Albert Hall, Sam Bottoms, Harrison Ford, Scott Glen, Dennis Hopper.

The most realistic account of the physical and psychological horrors of the Vietnam War; an updating of Joseph Conrads' *Heart of Darkness* about an army captain who is ordered to hunt down a deranged American officer operating in Cambodia with an army of guerilla tribesmen. Undeniably brilliant, this film is also claustrophobic and terrifying. Winner of Two Academy awards.

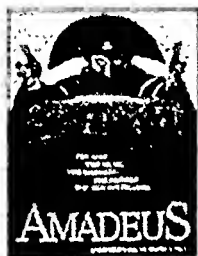
Amadeus (1984) USA 160 mins **Director:** Milos Forman **Cast:** F. Murray Abraham, Tom Hulce, Elizabeth Berridge, Jeffrey Jones, Charles Kay, Simon Callow, Christine Ebersole, Roy Dotrice, Kenny Baker

One of the most entertaining movies to emerge from Hollywood in the 1980's, *Amadeus* has beautiful music, colorful costumes, a terrific script based on the original stageplay, superb acting performances and a stirring and exciting story. Tom Hulce starred as the immortal Wolfgang Mozart and Murray Abraham as his embittered rival, court composer Antonio Salieri. Winner of Eight Academy awards.

Blow Up (1966) Italy 110 mins **Director:** Michaelangelo Antonioni **Cast:** David Hemmings, Vanessa Redgrave, Sarah Miles

Antonioni's break through masterpiece of detection and obsession begins with photographer Thomas taking pictures of a romantic couple cavorting in a public park. The photos develop into frightening grainy images of an apparent murder of an old man. The mystery remains intact long after the film ends.

The Best Years Of Our Lives (1946) USA 172 mins **Director:** William Wyler **Cast:** Fredric March, Myrna Loy, Dana



Andrews, Harold Russel, Virginia Mayo, Teresa Wright, Cathy O'Donnell

A landmark classic drama about three World War II veterans attempting readjustment to peacetime life and discovering that they have fallen behind. The most memorable film about the aftermath of World War II. Winner of Seven Academy awards.

The Bridge on The River Kwai

(1957) Great Britain 161 mins **Director:**

David Lean **Cast:**

Alec Guinness, Jack Hawkins, William Holden, Sessue Hayakawa, James Donald, Geoffrey Horne



This exceptional war movie is known for its visual beauty.

Set in a Japanese Prisoner of War camp in Burma, the story centres around the construction of a railway bridge by British and American POWs and its subsequent destruction by a small commando unit. Winner of Seven Academy awards.

Ben-Hur (1959) USA 217 mins **Director:**

William Wyler **Cast:** Charlton Heston, Jack Hawkins, Stephen Boyd, Hugh Griffith, Haya Harareet, Matha Scott, Sam Jaffe, Cathy O'Donnell, Finlay Currie.

This spectacular 15 million dollar epic set in the Roman empire's province of Judea, starred Charlton Heston as the Jewish prince Judah Ben Hur, whose childhood friendship with the Roman tribune Messala (Stephen Boyd) turns to enmity when Messala destroys Ben Hur family. Sentenced to the galleys Ben Hur rescues a Roman admiral during a sea battle and is adopted by him. Making his way back to Jerusalem, Ben Hur defeats Messala in a climactic Chariot race and rescues his mother and sister who have become lepers. They are cured by Christ at the moment of the crucifixion. Winner of Eleven academy awards, an all time record.

Breathless (1959) France 89 mins **Director:**

Jean Luc Godard **Cast:** Jean Paul Belmondo, Jean Seberg, Daniel Boulanger

A Hoodlum kills a policeman after stealing a car and takes it on the lam with his American girlfriend. This key film of the French 'New Wave' movement of the late fifties is a romanticized view of crime and street life. Veteran director Francois Truffaut wrote the story. The original French title was *A bout de souffle*.

The Ballad of Narayama (1983)

Japan 129 mins **Director:** Shohei Imamura

Cast: Ken Ogata

Based on one of the most unusual Japanese legends, a century ago in a remote mountain village in northern Japan, a local custom dictated that when a person reached 70 years old they were taken to Mount Narayama to die. A true masterpiece of Japanese cinema and a Grand Prize winner at the Cannes Film Festival in 1983.

Citizen Kane (1941) USA 120 mins

Director: Orson Welles **Cast:** Joseph Cotten, Orson Welles, Agnes Moorehead, Everett Sloane, Ray Collins, Dorothy Comingore, William Alland, Erskine Sanford

The rise to power of an American newspaper tycoon Charles Foster Kane, told in flashback through interviews with people who were close to him in his life time. Closely based on the career of newspaper magnate William Randolph Hearst, this remarkable movie is regarded as the greatest film ever made. Nominated for eight Oscars, but won only one award i.e., for best original screenplay.

Casablanca (1942) USA 102 mins

Director: Michael Curtiz **Cast:** Humphrey Bogart, Ingrid Bergman, Claude Rains, Paul Henreid, Conrad Veidt, Peter Lorre, Dooley Wilson, Madeleine Le Beau, S.Z. Sakall

Critically-acclaimed, bittersweet, popular, much loved, World War II flavoured, nostalgic story of intrigue and love that teamed Bogart and Bergman as ill fated lovers. Based on unproduced play *Everybody Comes*

his movie is indisputably one of the landmarks of American cinema. Winner of Three Academy awards.

A Clock Work Orange (1971) Great Britain 137 mins **Director:** Stanley Kubrick **Cast:** Malcolm Mc Dowell, Patrick Magee, Paul Farrell, Michael Cover, Warren Clarke, Michael Bates, John Clive, Andrienne Cori, Miriam Karlin

Bleakly pessimistic and utterly terrifying this brilliantly directed film, based on a novel by Anthony Burgess, takes audiences into a nihilistic and violent Britain of the future where anarchism reigns, gruesome crime is common place, and the young have lost all moral ties. First film to use the Dolby Laboratory Noise Reduction System.

Cabaret (1972) USA 123 mins **Director:** Bob Fosse **Cast:** Liza Minnelli, Michael York, Joel Grey, Marisa Berenson, Helmut Griem

An outstanding musical chronicling the adventures of an American singer in Berlin, in the days immediately preceeding World War II. Winner of Eight Academy awards.

Cries and Whispers (1973) Sweden 91 mins **Director:** Ingmar Bergman **Cast:** Harriet Andersson, Ingrid Thulin, Liv Ullmann, Erland Josephson, Kari Sylwan

The haunting memories of a dying young woman in the house where she was born and being cared for by her devoted servant and her married sister. Academy award for Best Cinematography (Sven Nykvist).

Chariots of Fire (1981) Great Britain 123 mins **Director:** Hugh Hudson **Cast:** Ian Charleson, Ben Cross, Nigel Havers, John Gielgud, Nicholas Farrell, Nigel Davenport, Lindsay Anderson, Ian Holm, Cherryl Campbell.

Visually beautiful and reminiscent of old fashioned inspirational movies, Chariots of fire boasts a fine script, excellent performances, a thrilling musical score and a glimpse into recent history. The moving story of two British athletes, both outsiders and both running

for a cause in the 1924 Olympics. Winner of Four Academy awards.

Cinema Paradiso (1988) Italy 123 mins **Director:** Giuseppe Tornatore **Cast:** Philip Noiret, Salvatore Cascio, Jacques Perrin, Marco Leonardi

The story focuses on the love of a young boy Salvatore, and indeed the entire Sicilian village where he lives - for movies. Young Salvatore watches movies from the kindly projectionists room of a theatre with much interest. The past unspools in a sentimental flash back for the middle aged Salvatore when he is summoned home for a funeral - of Alfredo the projectionist who is a surrogate father figure. A pleasant sense of nostalgia pervades this Oscar winner for Best Foreign language film. The film also won Palme D'Or at the Cannes festival.

Chicago (2002) USA 113 mins **Director:** Rob Marshall **Cast:** Renee Zellweger, Catherine Zeta Jones, Richard Gere, Queen Latifah, Lucy Liu, John C. Reilly, Christine Baranski, Dominic West, Taye Diggs

This Oscar winning best picture of 2002 is a razzle-dazzle tour de force, one of the best movie musicals of all time . Winner of Six Academy awards.

Double Indemnity (1944) USA 106 mins **Director:** Billy Wilder **Cast:** Fred Mac Murray, Barbara Stanwyck, Edward Robinson, Porter Hall

The movie is one of the finest examples of 'film noir' ever to hit screen. Barbara Stanwyck is a calculating, blonde seductress who lures insurance agent Mac Murray into staging her husbands "accidental death" with their handiwork later investigated by Robinson who traps them.

Doctor Zhivago (1965) USA 197 mins **Director:** David Lean **Cast:** Omar Sharif, Alec Guinness, Rod Steiger, Ralph Richardson, Julie Andrews, Geraldine Chaplin, Rita Tushingham, Klaus Kinski.

Based on Boris Pasternak's novel this sweep-

ing epic about a Russian doctor caught up in the turmoil of World War I and the Russian revolution was a spectacular box office success. The film is sweeping and episodic, with powerful individual segments. Its gorgeous scenery, romantic story, and haunting love theme have made it an audience favourite ever since its release. Winner of Five Academy awards.

Bicycle Thieves (1947) Italy 90 mins

Director: Vittorio De Sica **Cast:** Lamberto Maggiorani, Enzo Staiola, Lianella Carell

Considered by critics an all time classic, this touching, honest, beautifully human film tells the story of an unemployed Italian worker whose bicycle is stolen. He and his small son search Rome for the precious conveyance. Special Academy award for Best foreign film.



Double Suicide (1969) Japan 105 mins **Director:** Masahiro Shinoda **Cast:** Kichimon Nakamura, Shima Iwashita

Stunning portrait of erotic obsession and passion in turn-of-century Japan. Shinoda explores sexual taboos in his story of a merchant and a geisha whose ill fated love affair is orchestrated entirely by outside forces. This poignant drama is presented in the style of a Bunraku puppet play.

The Discreet Charm of The Bourgeoisie (1972) France/Spain/Italy 105 mins **Director:** Luis Bunuel **Cast:** Fernando Rey, Delphine Seyrig, Stephane Audran, Jean Pierre Cassel, Paul Frankeur, Bulle Ogier, Julianne Bertheau.

Bold social criticism distinguishes this savagely funny surrealistic film. Crafted by the master of black humour and irony, Bunuel who is known primarily for his courageous ideas rather than for technical virtuosity, the

movie concerns a group of friends who keep trying to get together for dinner and who are continually frustrated in the attempt. Basically a blistering attack on the stupidities of the world's bourgeoisie. Winner of Oscar for Best foreign film.

Day For Night (1973) France/Italy 117 mins **Director:** Francois Truffaut **Cast:** Jacqueline Bisset, Jean Pierre Leaud, Francois Truffaut, Valentina Cortese, Jean Pierre Aumont

A film within a film with Truffaut (as a fictional film director) best with difficulties of all kinds- the love affairs and emotional problems of his international cast -as he works his way through his latest production. Won the Best foreign film Oscar.

Dersu Uzala (1975) Russia/Japan 137 mins **Director:** Akira Kurosawa **Cast:** Maxim Munzuk, Yuri Salomin, Vladimir Klemenka, Svetlana Danielchenka

Kurosawa adventure, set at the turn of the century, and centering on a Siberian trapper and a hunter explorer who form a deep inseparable friendship while surveying the unexplored forests of Eastern Siberia and Taiga land. Academy award for Best Foreign language film.

The Deer Hunter (1978) USA 182 mins **Director:** Michael Cimino **Cast:** Robert DeNero, John Savage, Christopher Walken, John Cazale, Meryl Streep, George Dzundza

A huge sprawling movie about the effects of the Vietnam War on three young Pennsylvanian steel workers when they leave their home town for a tour of duty at the front. Only the strongest of the three survives; the others are crushed physically and mentally by the war and torture at the hands of the Viet Cong. Winner of Five Academy awards.

Dances with Wolves (1990) USA 183 mins **Director:** Kevin Costner **Cast:** Kevin Costner, Mary Mc Donnell, Graham Greene, Michael Spears, Rodney A Grant, Tantoo Cardinal, Charles Rocket, Jimmy Herman

It is a breath takingly well made film about a white man who comes into contact with Indians and adopts their way of life. It is both a stirring drama and a touching romance. Winner of Seven Academy awards.

Eight and A Half (1963) Italy 135 mins **Director:** Federico Fellini **Cast:** Marcello Mastroianni, Claudia Cardinale, Anouk Aimee Sandra Milo, Rosella Falk

Self analytical, unorthodox, confessional and wonderfully inventive, the autobiographical film, part fact and part fantasy, concerns a successful movie director who in Fellini's own words is 'trying to pull together the pieces of his life and make sense of them'. Perhaps Fellini's strongest cinematic achievement. Winner of Two Academy awards.

The Exorcist (1973) USA 122 mins **Director:** William Friedkin **Cast:** Ellen Burstyn, Linda Blair, Max Von Sydow, Jason Miller, Kitty Winn, Jack Mac Govern, Lee J. Cobb, Barton Heyman, Peter Masterson

Fourteen year old Regan is suddenly prone to fits and bizarre behaviour. After exhausting all the options of science and medicine, Regan's mother Chris turns to young priest Father Karras. Convinced that the girl is possessed by the devil, they call in a mysterious exorcist named Father Merrin. Their foe is no ordinary devil. Both the girl and the priest suffer numerous horrors during the struggle. A classic of modern horror movies. Winner of Two Academy awards.

E.T. The Extra Terrestrial (1982) USA 115 mins **Director:** Steven Spielberg **Cast:** Henry Thomas, Dee Wallace-Stone, Drew Barrymore, Peter Coyote, Sean Frye, Richard Swingler, K.C. Martel, Michael Durrell, Robert Barton, Frank Toth

E.T. is about a lovable toddler sized creature from outer space stranded in a Los Angeles suburb. Three children protect E.T. from a hostile adult world which would mistreat him in the name of science. After numerous adventures and hair's breadth escapes E.T. is

finally allowed to return to his own planet. Won Four Academy awards.

From Here to Eternity (1953) USA 118 mins **Director:** Fred Zinnemann **Cast:** Burt Lancaster, Montgomery Clift, Deborah Kerr, Frank Sinatra, Ernest Borgnine, Jack Warden, Donna Reed, Philip Ober, John Dennis

Based on James Jones's novel, this movie about soldiers and the women in their lives is set in Hawaii at the time prior to Pearl harbour. Shot in documentary style this film is an unflattering look at military life tackling issues like adultery, injustice, corruption and murder. Winner of Eight Academy awards.

The Four Hundred Blows (1959) France 99 mins **Director:** Francois Truffaut **Cast:** Jean Pierre Leaud, Patrick Auffay, Claire Maurier, Albert Remy

Powerful story of a boy and the world that seems to be at odds with him is true and touching. Powerful, tender and at times overwhelmingly sad, this great film touches all the right buttons without being exploitative.

The French Connection (1971) USA 104 mins **Director:** William Friedkin **Cast:** Gene Hackman, Roy Scheider, Fernando Rey, Tony Lo Bianco, Ann Rebbot, Arlene Farber, Marcel Bozzuffi, Frederic de Pasquale

Based-on-fact thriller about two New York Narcotics squad detectives (Hackman and Scheider) who play a long shot hunch hoping to smash a 32 million dollar dope smuggling ring. The high point of this film is an exciting car chase with Hackman driving through on coming traffic in pursuit of an elevated train. Winner of Five Academy awards.

Fanny and Alexander (1982) Sweden/France/West Germany 197 mins **Director:** Ingmar Bergman **Cast:** Pernilla Allwin, Bertil Guve, Erland Josephson

A beautiful fantasy about childhood complete with magic, villainy and melodrama, Fanny and Alexander is a work of art revealing the director's great range, his compassion

and a rare inspired sense of joy. Set in the early part of the century, the movie tells the story of a brother and sister from a warm, loving, and colourful theatre family. Won Academy Awards for Best foreign film, Cinematography, Costume and Art Direction.

Forrest Gump (1994) USA 142 mins
Director: Robert Zemeckis **Cast:** Tom Hanks, Robin Wright Penn, Sally Field, Rebecca Williams, Gary Sinise, Sam Anderson, John Randall, George Kelly, Bob Penny

based on the novel by Winston Groom, the feel good movie boasts a magnificent performance by Tom Hanks and remarkable special effects. Winner of Six Academy awards.

Gone with The Wind (1939) USA
231 mins **Director:** Victor Fleming **Cast:**
Clark Gable, Vivien Leigh, Leslie Howard,
Olivia De Havilland, Thomas Mitchell, Barbara
O'Neill, George Reeves, Evelyn Keyes

A legend in its own time and a legend today this vast technicolor epic based on Margaret Mitchell's novel of a woman's coming of age against the background of the American Civil War is also a story packed with adventure. Winner of Nine Academy awards.

The Great Dictator (1940) 54
128 mins **Director:** Charles Chaplin **Cast:**
Charles Chaplin, Paulette Goddard, Eric Robson,
Grace Hayle

The first talkie film of Chaplin's, which plays two characters, a Jewish cantor and Adolphe Hynkel, dictator of Tomania. This is a satire on Adolf Hitler and the Nazis. This film marks last time Chaplin uses the "Tramp" characterization.

Gigi (1958) USA The more Directors
Vincente Minnelli ~~Cast~~ ~~Cast~~ ~~Cast~~ ~~Cast~~ ~~Cast~~
Chevalier, Louis; Curran, Eas ~~Cast~~ ~~Cast~~ ~~Cast~~ ~~Cast~~ ~~Cast~~
Gingold, Jacques ~~Cast~~ ~~Cast~~ ~~Cast~~ ~~Cast~~ ~~Cast~~

Based on the book by ~~Christina Sothcott~~
of nine Academy awards ~~for Best Screenplay~~
Shot almost entirely in ~~East London~~
cerns a young girl ~~who is~~

who gains the heart of a bored Parisian. An elegant musical film.

The Great Escape (1963) USA 170 mins **Director:** John Sturges **Cast:** Steve McQueen, James Garner, James Coburn, Donald Pleasance, Charles Bronson, Richard Attenborough, David Mc Callum

The movie concerns a group of Allied prisoners who plan a major escape from a Prisoner of War camp, partly with the idea of pulling Germans away from the front to aid in the recapture of the prisoners. Humour, action, suspense and a great chase scene all play a part in this epic cinemascope adventure film with the tragic ending.

The Godfather (1972) USA 175 mins **Director:** Francis Ford Coppola **Cast:** Marlon Brando, Al Pacino, James Caan, John Cazale, Robert Duvall, Diane Keaton, Talia Shire, Alex Rocco, Sterling Hayden, John Marley



Marianne Perle

The gangster film of the contemporary cinema, a massive saga of honour, loyalty and brutal murder of the Concrete family of New York fights to keep its ascendancy over rival Mafia-type families. Winner of Three Academy Awards, Best Artistic Film, Best Editing, Best

Gadden, 1968, p. 74-75.

adds another jewel to the crown of Iranian Cinema.

Gandhi (1982) Great Britain 188 mins
Director: Richard Attenborough **Cast:** Ben Kingsley, Candice Bergen, Edward Fox, Trevor Howard, Martin Sheen, John Gielgud, Rohini Hattangady, Roshan Seth, John Mills, Ian Charleson, Saeed Jaffrey, Amrish Puri, Om Puri.



One of the finest screen biographies ever, this film chronicles the life of the Indian leader Mohandas K. Gandhi whose inspired leadership took India from the yoke of British imperialism to Independence. Winner of Nine Academy awards.

How Green Was My Valley (1941) USA 118 mins **Director:** John Ford
Cast: Maureen O'Hara, Walter Pidgeon, Donald Crisp, Anna Lee, Roddy McDowall, Sara Allgood, Barry Fitzgerald

Based on Richard Llewellyn's novel the movie presents a nostalgic view of the joys and sorrows of a family in a Welsh mining town. Winner of Five Academy awards.

Hiroshima Mon Amour (1959) France 88 mins **Director:** Alain Resnais **Cast:** Emmanuelle Riva, Bernard Fresson, Eiji Okada

A mind boggling tale about two people, one a French woman, the other, a male survivor of the blast at Hiroshima. They meet and become lovers. Together they live in their pasts, present and futures in a complex series of fantasies and nightmares.

It Happened One Night (1934) USA 105 mins **Director:** Frank Capra **Cast:** Clark Gable, Claudette Colbert, Walter Connolly, Alan Hale, Roscoe Karns, Jameson Thomas, Arthur Hoyt

One of the greatest romantic comedies in film history, his film is about a runaway heiress and a wandering journalist who form a lasting

relationship in their journey across country together. Clark Gable and Claudette Colbert are the movies selling points. Winner of Five Academy awards.

Ivan the Terrible (1945) USSR 188 mins **Director:** Sergei M. Eisenstein **Cast:** Nicolai Cherkasov, Ludmila Tselikovskaya

Considered among the classics of World Cinema, this epic biography of Russia's first Czar was commissioned by Joseph Stalin to encourage acceptance of his harsh and historically similar policies. World renowned director Eisenstein, instead transformed what was designed as party propaganda into a panoramic saga of how power corrupts those seeking it.

Jaws (1975) USA 124 mins **Director:** Steven Spielberg **Cast:** Roy Scheider, Robert Shaw, Richard Dreyfuss, Lorraine Gary, Jay Mello, Murray Hamilton, Carl Gottlieb, Peter Benchley, Jeffrey Kramer

Based on the best selling novel by Peter Benchley, this adventure classic is set at an East Coast resort town, Amity Island which is being terrorized by a great white shark. A trio of shark hunters team up to hunt down the rogue. One of the highest grossing films of all time. Winner of Three Academy awards.

Jurassic Park (1993) USA 127 mins **Director:** Steven Spielberg **Cast:** Sam Neill, Laura Dern, Jeff Goldblum, Richard Attenborough, Bob Peck, Martin Ferrero, Samuel L. Jackson, Joseph Mazzello, B.D. Wong, Ariana Richards

In this adaptation from the novel by Michael Crichton, dinosaurs are genetically recreated to populate the ultimate theme park and a special few are allowed a sneak preview. Awe and wonder soon turns to terror as the creatures break out of their confines and go on a rampage. Winner of Three Academy awards.

Knife in The Water (1962) Poland 94 mins **Director:** Roman Polansky **Cast:** Leon Niemczyk, Jolanta Umecka, Zygmunt Malanowicz

Absolutely fascinating feature film debut for director Polanski. A couple off for a sailing holiday encounter a young hitchhiker and invite him along on their yacht. The resulting sexual tension is riveting, the outcome impossible to anticipate. Won the Academy award for Best Foreign Film.

Hamlet (1948) Great Britain 150 mins

Director: Laurence Olivier **Cast:** Laurence Olivier, Basil Sydney, Eileen Herlie, Felix Aylmer, Peter Cushing, Stanley Holloway, Jean Simmons, Norman Wooland



Shakespeare's great tragedy transformed and reduced (from 4 1/2 hrs to 2 1/2 hrs) by Laurence Olivier, who both directed and starred as the Prince of Denmark, who learns from a ghost that his father has been murdered and that his mother has married the murderer. The first wholly British film to be named best of the year. Winner of Four Academy awards.

Kramer Vs Kramer (1979) USA 105 mins **Director:** Robert Benton **Cast:** Dustin Hoffman, Meryl Streep, Justin Henry, Jane Alexander, Howard Duff, Jobeth Williams

Kramer Vs Kramer is a moving account of the aftermath of divorce and a memorable exploration of parent hood. Advertising executive Ted Kramer and his wife Joanna have seven year old son Billy. One day Joanna leaves her husband and son. Ted and Billy have learned to live with each other, Joanna returns and demands Billy's sole custody. Winner of Five Academy awards.

The Lady Vanishes (1938) Great Britain 97 mins **Director:** Alfred Hitchcock **Cast:** Margaret Lockwood, Michael Redgrave, Dame May Whitty, Basil Rodford, Paul Lukas, Launton Wayne.

This charming and riveting suspense drama is a masterpiece. Set almost entirely on a train to England, the movie concerns a young woman who discovers that an elderly lady, actually, a British spy, appears to have vanished into this air. She seeks the aid of a fellow passenger in an attempt to locate the old lady. One of the most admired films of Hitchcock.

La Strada (1954) Italy 94 mins **Director:** Federico Fellini **Cast:** Anthony Quinn, Giulietta Masina, Richard Basehart

Fellini's first internationally acclaimed film. Gelsomina, a simple peasant girl is sold to a circus strongman Sampano and as she follows him on his tour through the country side, she falls in love with him. She becomes the victim of his constant abuse and brutality until their meeting with an acrobat dramatically changes the course of their lives. Winner of Academy award for Best Foreign film.

Lawrence of Arabia (1962) Great Britain 221 mins **Director:** David Lean **Cast:** Peter O' Toole, Omar Sharif, Alec Guinness, Arthur Kennedy, Anthony Quinn, Jack Hawkins, Jose Ferrer, Claude Rains.

One of the greatest films of all time, with rich cinematography of the immense desert. A sweeping, breath-taking, cinematic biographical epic that follows the true life exploits of a famed British officer, T.E. Lawrence and his transformation from an enigmatic eccentric to a hero in WWI Arabia. Winner of Seven Academy awards.

The Last Emperor (1987) UK 160 mins **Director:** Bernardo Bertolucci **Cast:** John Lone, Peter O' Toole, Joan Chen, Victor Wong, Dennis Dun, Maggie Han, Wu Jun Mei.

In this awe-inspiring epic Bertolucci dramatizes the life of Pu Yi, China's last emperor. When he was taken from his home at the age of three to become the all powerful Emperor, the youngster was ironically condemned to a life time of imprisonment. Winner of Nine Academy awards.

The Lord of the Rings: The Return of the King (2003) USA 201 mins

Director: Peter Jackson **Cast:** Sean Astin, Cate Blanchet, Orlando Bloom, Ian McKellen, Billy Boyd, Viggo Mortenson, Liv Tyler, Elijah Wood, John Noble, Andy Serkis, Miranda Otto.....

Based on the epic fantasy by J.R.R. Tolkien, 'The Return of the King' marks the end of the journey that began with 'The Fellowship of the Ring'. It tells the concluding story of the hobbits Frodo and Sam, who must make a perilous journey in order to cast the One Ring, which is the source of all evil. The movie is also memorable for the sheer scale of its battle scenes. Won 11 Academy awards, an all time record.

My Fair Lady

(1964) USA 170 mins

Director:

George Cukor

Cast: Audrey

Hepburn, Rex Harrison,

Stanley Holloway, Jeremy Brett,

Gladys Cooper, Wilfrid Hyde-

White, Theodore Bikel

The film version of Bernard Shaw's *Pygmalion* written in 1913. The story concerns an arrogant linguist Professor Henry Higgins betting his friend Colonel Pickering that he can transform cockney flower girl Eliza Doolittle into a lady. After six months Higgins wins the bet, but Eliza feels betrayed. She decides to leave him, but finds it is not easy. Winner of Eight Academy awards.

A Man For All Seasons (1966)

Great Britain 120 mins **Director:** Fred

Zinnemann **Cast:** Paul Scofield, Robert Shaw,

Leo Mc Kern, Wendy Hiller, Orson Welles,

Susannah York, Nigel Davenport, John Hurt

The battle of wills between Sir Thomas More, Chancellor of England and ebullient Henry VIII who in 1528 was seeking a divorce from Catherine of Aragon in order that he might marry Anne Boleyn. More's brave stand

led to his martyrdom. Winner of Six Academy awards.

Midnight Cowboy (1969) USA 113 mins

Director: John Schlesinger **Cast:** Jon Voight, Dustin Hoffman, Sylvia Miles, Ruth White, John McGiver, Brenda Vaccaro, Jennifer Salt, Barnard Hughes

In this tremendous film about the struggle for existence in the urban nightmare of New York's 42nd street area, Jon Voight and Dustin Hoffman deliver brilliant performances. Voight plays Joe Buck an aspiring male prostitute from Texas who heads to New York for making money by living as a stud. Hoffman plays Rastorizzo, a slimy con artist suffering from tuberculosis. They depend on each other for their existence. Winner of Three Academy awards.

Mephisto (1981) Hungary 144 mins

Director: Istvan Szabo **Cast:** Klaus Maria

Brandauer, Krystyna Janda, Gyorgy Cserhalmi,

Peter Andorai, Rolf-Hoppe, Ildiko Bansagi

Hungarian film tracing the rise of an ambitious German actor who marries the daughter of a pro-Nazi figure, thrives when the Nazis come to power then subverts classic figures to the Nazi outlook. A vivid portrait of moral corruption in a malignant society. Won the Academy award for the Best Foreign film.

Nazarin (1958) Spain 92 mins

Director: Luis Bunuel **Cast:** Francisco Rabal, Jesus

Fernandez

A memorable film by Bunuel that presents a clever variation of the Don Quixote theme, applied to religion and hypocrisy. A priest is cast out of his church for giving shelter to a prostitute. This surrealistic comedy won the Grand Prize at the Cannes Film Festival.

Nostalghia (1983) Italy 120 mins

Director: Andrei Tarkovsky **Cast:** Oleg

Yankovsky, Erland Josephson

Tarkovsky's first film made outside his native Russia is this highly personal work about a Russian poet on a research project in Italy who attempts to turn his longing for his home and family into a positive experience.



On The Water Front (1954) USA 130 mins **Director:** Elia Kazan **Cast:** Marlon Brando, Karl Malden, Rod Steiger, Eva Marie Saint, Lee J. Cobb, Pat Henning, Leif Erickson, John F. Hamilton

This celebrated trucking film exposes degrading dockside labour practices, with director Kazan throwing a harsh spotlight on the crooked union bosses who used strong arm tactics and forced Stevedores to beg for their jobs.

Marlon Brando is superb as Terry Malloy who tries to overthrow a corrupt union and succeeds. Winner of Eight Academy awards.

One Flew Over The Cuckoo's Nest (1975) USA 134 mins **Director:** Milos Forman **Cast:** Jack Nicholson, Louise Fletcher, Sydney Lassik, Brad Dourif, William Redfield, Dean R. Brooks, Peter Brocco, Danny D'Vito

Patrick Mc Murphy is a drifter who pretends to be a mentally ill in order to get out of work duty at prison. He is sent to a mental ward ruled by the tyrannical Nurse Ratched who regiments the lives of the patients without helping them. Mc Murphy who sees the absurdity of the situation becomes the patients symbol of non conformity and rebellion. Winner of five major Academy awards - best picture, director, actor, actress and script.

Psycho (1960) USA 109 mins **Director:** Alfred Hitchcock **Cast:** Anthony Perkins, Janet Leigh, Vera Miles, John Gavin, Martin Balsam, John McIntire, Simon Oakland, Patricia Hitchcock

Psycho is regarded as the 'mother' of all modern horror suspense films-it inspired plenty of future screen 'slashers'. The murder of Marion Crane (Janet Leigh) in the shower of Room one in Bates Motel is one of the most shocking and famous scenes in the history of



Elia Kazan

films. Anthony Perkins's haunting portrayal of Norman Bates is one of cinema's most chilling performances.

Patton (1970) USA 170 mins **Director:** Franklin J. Schaffner **Cast:** George C. Scott, Karl Malden, Stephen Young, Michael Bates, Michael Strong, Frank Latimore, James Edwards, Cary Loftin

The wartime career of one of the most controversial American commanders of World War II, General George S. Patton who forfeited command of the 7th army in Sicily after he had struck a soldier suffering from battle fatigue. George Scott is spell binding in the title role. Winner of Seven Academy awards.

Picnic At The Hanging Rock (1975) Australia 110 mins **Director:** Peter Weir **Cast:** Rachel Roberts, Helen Morse, Dominic Guard, Jackie Weaver.

Surreal, hypnotic suspense story revolves around the mysterious disappearance of a group of girl students from the Apple yard College at the turn of the century in Australia. They were on a picnic at the nearby Hanging Rock, a primordial formation of mysteriously forbidding rocks.

Rashomon (1950) Japan 88 mins **Director:** Akira Kurosawa **Cast:** Toshiro Mifune, Machiko Kyo, Masayuki Mori, Takashi Shimura

This was the first Japanese film to receive widespread international recognition after World War II. A bandit is on trial for raping a woman in a forest in front of her husband and then murdering the husband. The events are related by the three principals and a wood cutter who witnessed the crime. All the versions contradict one another and all are equally convincing. Won the Academy award for Best Foreign language film.

Roman Holiday (1953) USA 118 mins **Director:** William Wyler **Cast:** Gregory Peck, Audrey Hepburn, Eddie Albert, Harcourt Williams, Hartley Power, Margaret Rawlings

Romantic comedy which made Audrey Hepburn a star and earned her an Oscar in her first major role that of a young princess Ann who escapes from the pomp and ceremony of her surroundings for 24-hours and enjoys a brief romance with American journalist Joe Bradley (Gregory Peck). Won Three Academy awards.



Rain Man (1988) USA 133 mins **Director:** Barry Levinson **Cast:** Dustin Hoffman, Tom Cruise, Valeria Golino, Ralph Serymour, Jack Murdock, Gerard R. Molen

Hoffman gives the performance of his career as the autistic older brother (Raymond Babbit) of Tom Cruise who plays a thoughtless, self-centered hustler (Charlie Babbit) with room in his life only for money. Greed propels him to take a cross country road trip with Raymond, who inherited the bulk of Dad's vast estate. Won Four major Academy awards for best picture, director, actor and original screenplay.

Red Sorghum (1988) China 91 mins **Director:** Zhang Yimou **Cast:** Gong Li, Jian Weng, Liu Ji

A superb pastoral epic from the People's Republic of China and winner of Golden Bear at the 1988 Berlin Film Festival. The story relates a passionate folk tale about village wine makers who fight against interloping Japanese invaders. Lyrical and affecting drama.

Snow White and The Seven Dwarfs (1938) USA 83 mins **Director:** David Hand

Based on the well known fairy tale by Brothers Grimm, this milestone in Animation history was Walt Disney's first full length feature. It is an extraordinary well crafted film with each cartoon character vividly drawn and given a distinct personality. The seven dwarfs - Bashful, Doc, Dopey, Grumpy, Happy, Sleepy and Sneezy - are endearing and won-

derful. The wicked queen is the epitome of cold, dark beauty. And snow white is a charmer. This delightful, colourfilm is a treat for the whole family. Even the songs of the film have become very popular and famous.

The film received a Special Academy award consisting of one regular sized statuette and seven 'dwarf' statuettes.

Singin' In The Rain (1952) USA 103 mins **Director:** Gene Kelly, Stanley Donen **Cast:** Gene Kelly, Debbie Reynolds, Jean Hagan, Donald O'Connor

One of the all time best Hollywood musicals that spoofs and satirizes the traditional chaos surrounding the end of the silent era and the dawn of the 'talkies'.

The Seventh Seal (1956) Sweden 96 mins **Director:** Ingmar Bergman **Cast:** Max Von Sydow, Bengt Ekerot, Gunnar Bjornstrand, Bibi Anderson, Gunnel Lindblom

A Swedish knight who has been on the Crusades and has lost his faith returns home to a land beset by plague and panic. He meets Death who offers him a short reprieve by playing a game of chess. This film is about disillusionment, good vs evil, the existence or non-existence of God and other questions. What makes it a masterpiece, however are the strong performances and stunning photography. Many of the images, the chess match, the final Dance of Death are among the most famous in the history of cinema.

The Sound of Music (1965) USA 174 mins **Director:** Robert Wise **Cast:** Julie Andrews, Christopher Plummer, Peggy Wood, Anna Lee, Eleanor Parker, Debbie Turner, Heather Menzies, Nicholas Hammond, Duan Chase, Angela Cartwright, Kym Karath

Maria is a free spirited novice at a convent who is hired by Baron Capt. George Von Trapp to be governess to his seven children. She becomes friends with the children and opens them to the joy of music, winning the heart of their father whom she later marries. When the Nazi invasion of Austria threatens

their happiness they plot a dramatic escape. Winner of Five Academy awards.

Starwars (1977) USA 121 mins **Director:** George Lucas **Cast:** Harrison Ford, Peter Cushing, Alec Guinness, Kenny Baker, Carrie Fisher, Mark Hamill, Anthony Daniels, Peter Mayhew

One of the most inventive and entertaining films ever made Starwars knits together fragments of mythology and science into a tale everyone can relate to. A big budget blockbuster with astounding special effects. Won Seven Academy awards.

The Seven Samurai (1954) Japan 197 mins **Director:** Akira Kurosawa **Cast:** Toshiro Mifune, Taka-shi Shimura, Yoshio Inaba, Ko Kimura, Daisuke Kato, Minoru Chiaki, Kamatari Fuji-wara.



This Japanese movie about seven swordsmen coming to the aid of a besieged peasant village - is one of those rare screen wonders that seems to end much too soon. Its story is appealing and timeless. Winner of Academy awards for Best Foreign language film.

The Silence of the Lambs (1991) USA 118 mins **Director:** Jonathan Demme **Cast:** Jodie Foster, Anthony Hopkins, Scott Glenn, Ted Levine, Frankie Faison, Kasi Lemmons, Anthony Heald.

In this shock filled movie, an FBI cadet is assigned by her superior to interview an imprisoned, cannibalistic psychopath in the hopes of getting his help in capturing a crazed serial killer. Superb performances by Foster and Perkins. Winner of Five major Academy awards.

Schindler's List (1993) USA 185 mins **Director:** Steven Spielberg **Cast:** Liam Neeson, Ben Kingsley, Ralph Fiennes, Caroline Goodall, Jonathan Sagalle, Embeth Davidtz, Andrzej Seweryn

The story of one man's (Oskar Schinder) struggle to save the lives of 1000 Polish jews during the Third Reich's implementation of Hitler's 'final solution'. Spielbergs' masterpiece. Won Seven Academy awards.

Tokyo Story (1953) Japan 139 mins **Director:** Yasujiro Ozu **Cast:** Chishu Ryu, Chiyeko Higashiyama, Kyoko Kagawa, Shiro Ozaka, Kuniko Miyake, Haruko Sugimura

Ozus overpowering masterpiece is a deeply felt human drama about an elderly couple who travel to Tokyo, where they are unenthusiastically received by their grown up children. Outstanding black and white cinematography brilliantly captures the landscapes of Tokyo.

Throne of Blood (1957) Japan 110 mins **Director:** Akira Kurosawa **Cast:** Toshiro Mifune, Isuzu Yamada, Minoru Chiaki, Takashi Shimura, Chieko Naniwa, Takamaru Sasaki, Akira Kubo

Kurosawa's retelling of 'Macbeth' may be the best film adaptation of Shakespeare ever made. He uses the medium to present Shakespeare's themes in visual images.

2001: A Space Odyssey (1968) Great Britain 141 mins **Director:** Stanley Kubrick **Cast:** Kier Dullea, Gray Lockwood, William Sylvester, Daniel Richter, Robert Beatty, Sean Sullivan, Margaret Tyzack, Leonard Rossiter

Spectacular movie production of the future revolving round the discovery of a centuries old monolith on the moon and the subsequent journey by a group of astronauts to Jupiter in search of extra terrestrial life. Breath taking special effects by Kubrick and his team earned the film an Academy award. The film contains some of the most powerful images ever to grace a science fiction film.

The Tin Drum (1979) Germany/France 142 mins **Director:** Volker Schlöndorff **Cast:** David Bennent, Angela Winkler, Mario Adorf, Daniel Olbrychski, Charles Aznavour

Gunther Grass's bizarre tale of three

Oskar, who stops growing as the Nazis rise to power in Germany. Oskar expresses his outrage by banging on a tin drum. This unique film has a disturbing dream like quality, while its visuals are alternately startling and haunting. Won Academy award for Best Foreign Film. Winner of Grand Prix at Cannes Festival.

Three Colours:- Blue, White, Red (1993, 1994) France/Poland/Switzerland **Director:** Krzysztof Kieslowski **Cast:** Juliette Binoche, Benoît Regent, Emmanuelle Riva, Charlotte Very, Florence Pernel, (Blue) Zbigniew Zamachowski Julie Delphy (white), Irene Jacob, Jean-Louis Trintignant (Red)

Three feature films work separately and as a trilogy, symbolising the three colours which stand for three concepts - Liberty, Equality and Fraternity.

Blue- is a mournful anthem to the ideal of a new, post cold war Europe. Julie loses her husband Patrice, a renowned composer and daughter Anna in a car accident. She tries to forget, to cut herself off from all previous ties and begin a new life. The subtle use of the theme colour is echoed, highlighted and countered by a soaringly beautiful score.

White- Karol, a Polish hairdresser in Paris has become impotent and his wife throws him out on to the streets. His revenge is to turn into a ruthless entrepreneur in the chaotic free market of Poland.

Red- Imposes a formal unity on the trilogy with the judicial intervention of a Retired Judge. Valentine, a young model and the old Judgement as adversaries initially but a curious bond develops between them over a period of incident rich time.

Titanic (1997) USA 194 mins **Director:** James Cameron **Cast:** Leonardo Di Caprio, Kate Winslet, Kathy Bates, Billy Zane, Gloria Stuart, Bernard Hill, Bill Paxton, Jonathan Hyde

James Cameron made Titanic on a monumental scale, meticulously recreating an ill-fated journey of the luxury liner with lavish

sets and special effects and a haunting emotional core. Leonardo Di Caprio and Kate Winslet are perfectly cast as the vulnerable young lovers from opposite ends of the social strata who find true passion before the ship collides with an iceberg. Winner of Eleven Academy awards an all time record.

Umberto D (1955) Italy 89 mins **Director:** Vittorio De Sica **Cast:** Carlo Battista, Maria Pia Cassilio

Umberto an elderly retired civil servant living on an inadequate pension in postwar Rome, is threatened with eviction unless he pays his back rent. He also deeply care about his dog Flike and a pregnant and unmarried young maid Maria who also faces eviction. This is a realistic socially moving drama, one of director De Sica's best.

Ugetsu (1953) Japan 94 mins **Director:** Kenji Mizoguchi **Cast:** Machiko Kyo-Masayuki Mori, Eitaro Ozawa, Kinuyo Tanaka-Mitsuko Mito

Set in 16th century Japan, this film follows the lives of two Japanese peasants as their greed and ambition brings disaster upon their families. There is a fine blending of action and comedy in this ghostly tale.

Vertigo (1958) USA 128 mins **Director:** Alfred Hitchcock **Cast:** James Stewart, Kim Novak, Barbara Bel Geddes, Henry Jones, Tom Helmore, Ellen Carby, Lee. Patrick, Raymond Bailey

Vertigo, a haunting tale of deception, madness and death, is one of Hitchcock's most closely studied films for its psychological complexity. With a plot full of twists and surprises, excellent direction and stylish cinematography Vertigo is thrilling, thought provoking and timeless.

The Wizard of Oz (1939) USA 101 mins **Director:** Victor Fleming **Cast:** Judy Garland, Frank Morgan, Ray Bolger, Bert Lahr, Margaret Hamilton, Billie Burke, Jack Haley

The film belongs to the exclusive category of films capable of equally enchanting children and adults. The tale of the little girl

Dorothy who is whirled away from home by a tornado and manages to get back with the aid of three friends. Won Two Academy awards for Best original score and Best Song.

Wages of Fear (1953) France/Italy 128 mins **Director:** Henri-Georges Clouzot **Cast:** Yves Montand, Charles Vanel, Peter Van Eyck, Folco Lolli, Vera Clouzot

This masterpiece of suspense concerns four Europeans stranded and broke in a South American country, take a job of driving two truckloads of nitro-glycerine over hundreds of miles of mountain roads. The roads are horrible and the trucks may blow up at any moment. It is also an angry denunciation of the exploitation of workers and an exploration of the relationships between four men.

Wild Strawberries (1957) Sweden 90 mins **Director:** Ingmar Bergman **Cast:** Victor Sjöström, Ingrid Thulin, Bibi Andersson, Gunnar Björnstrand, Max Von Sydow

An elderly Swedish Professor Isak Borg drives back to his home town to receive an

honorary degree. His past life is revealed through dreams and a series of flash backs. It is one of the most-influential films in history and is still studied by film makers everywhere.

West side Story (1961) USA 151 mins **Director:** Robert Wise, Jerome Robbins **Cast:** Natalie Wood, Richard Beymer, Rita Moreno, Ned Glass, George Chakris, Russ Tamblyn, Simon Oakland

A musical updating of Shakespeare's *Romeo and Juliet* to the slums of New York with Tony and Maria trying to find peace and love despite the gang wars between the immigrant Puerto Ricans (The Sharks) and the native New Yorkers (The Jets) going on around them. Winner of Ten Academy awards.

Z (1969) France/Algeria 127 mins **Director:** Costa-Gavras **Cast:** Yves Montand, Jean-Louis Trintignant, Jacques Perrin, Irene Papas, Charles Denner, François Perier.

Chilling political thriller based on the true life incident of the 1963 assassination of a left wing Greek deputy. Winner of Academy award for Best foreign language film.

Who did it first? = 250 FIRSTS

First Nobel Prize winner for Literature - Sully Prudhomme, France (1901)

First Nobel Prize winner for Peace - Jean Henri Dunant, Switzerland & Frederic Passy, France (1901)

First Nobel Prize winner for Physics - Wilhelm Conrad Roentgen, Germany (1901)

First Nobel Prize winner for Physiology & Medicine - Emil Adolf Von Behring, Germany (1901)

First Nobel Prize winner for Chemistry - Jacobus Henricus Van't Hoff, Netherlands (1901)

First Nobel Prize winner for Economics -

Ragnar Frisch, Norway & Jan Tinbergen, Netherlands (1969)

First person to win two Nobel Prizes - Marie Sklodowska Curie (first in Physics, 1903 and the second in Chemistry, 1911)

First Pulitzer Winner for Biography - Laura E. Richards, H. Elliott, and Florence Hall for "Julia Ward Howe" (1917)

First Pulitzer Winner for History - Jean Jules Jusserand for "With Americans of past and present days" (1917)

First Pulitzer Winner for Reporting - Herbert B. Swope (1917)

First black to receive the Nobel Peace Prize -
Ralph Bunche (1950)

First Indian to win Nobel Prize in Literature -
Rabindranath Tagore. He was also the first
Asian to get the prize (1913)

First Indian to win Booker Prize - Arundhati
Roy. For 'The God of Small Things' (1997)

First Indians to win
Bharat Ratna - Dr. S.
Radhakrishnan, C.
Rajagopalachari, and
Dr. C.V. Raman
(1954)

First Indian to win
Dadasaheb Phalke
Award - Devika Rani
(1970)



Dr. S. Radhakrishnan

First bank in the world - Egibi bank founded
in Babylon during the period of Nebu-
chadnezzar (605 - 562 BC)

First talkie movie in the world - "The Jazz
Singer" (1927)

First Oscar winner for the Best Actor - Emil
Jannings (1928)

First black actor to win an Oscar in a major
category - Sidney Poitier. It was for his role
in the film, "Lilies of the Field" (1964)

First Indian Oscar winner - Bhanu Athaiya,
For Best Costume Design for the film
'Gandhi' (1982)

First Indian Oscar nomination for Best For-
eign Language Film - Mother India (1957)

First criminal to be executed by electrocu-
tion - William Kemmler in Auburn Prison
of New York (1890)

First skyscraper in the world - Home Insur-
ance Building, Chicago, Illinois. William
LeBaron Jenny was the architect of this 10
storey, 138 ft., building (1885)

First magician to perform the magic of saw-
ing a woman in half - Count de Grisley
(1799)

First aerial photographers in the world -
Samuel Archer King and William Black.
They made two photos of Boston (1860)

First dry dock in the world - Portsmouth,
Hampshire (1495)

First direct transfusion of blood - performed
by Richard Lower, English physician and
physiologist (1666)

First person to be convicted by the process
of DNA fingerprinting - Colin Pitchfork
(1988)

First person to be exonerated by the process
of DNA fingerprinting - Richard Buckland
(1988)

First person to be executed by the guillotine
- Nicolas J. Pelletier (1792)

First President of ADB-Takeshi Watanabe
(1966)

First Beauty Contest in the world - Started by
Cypselus, the King of the Greek City of
Korinth. It continued for centuries (700 BC)

First cloned mammal - Dolly, the lamb (1996)

First sex-change operation in the world -
George (Christine) Jorgenson (1952)

First human heart transplant was performed
by - Dr. Christian Barnard (1967)

First human heart transplant recipient - Louis
Washkansky. He lived only 18 days with
the new heart (1967)

First recipient of a permanent artificial heart
- Barney Clark (1982)

First artificial pacemaker implant into a hu-
man - By a Swedish team using a pace-
maker designed by Rune Elmqvist. The
patient was Arne Larsson (1958)

First test tube baby - Louise Brown. In
Lancstershire, England. Patrick Christo-
pher Steptoe, English obstetrician, to-
gether with Robert Edwards, biologist, suc-
ceeded in this first human in vitro ferti-
lization (1978)

First Indian Test tube baby - Harsha, at KEM
hospital Mumbai. Indira Hinduja was the
doctor (1986)

Parkinson's disease was first described by -
James Parkinson, British neurologist (1817)

Hodgkin's disease was first recognized by -
Thomas Hodgkin, English physician. He

Centre-NSCN (I-M) ceasefire extension in Manipur.

27 Centre decides to restrict the four-year-old agreement in Nagaland, taking into account the violent protests in Manipur • Police arrest prime suspect in the Phoolan Devi murder case, Sher Singh Rana (Pankaj Singh) who reportedly confesses to crime to avenge the massacre of 22 Thakurs in Behmai in 1981 • 'Red showers' reported in some parts of Kerala, where collapse and disappearance of wells has been causing concern for some time.

30 Maharashtra govt. stays its earlier decision to downsize grants to English medium schools by 50%. • Centre orders probe into alleged use of 'banned drugs' by RCC, Trivandrum for conducting efficacy tests • Centre for Earth Science Studies attributes 'red rain' in Kerala to meteor dust.

31 PM AB Vajpayee, responding to criticism of his regime from within BJP and NDA, threatens to resign • TNadu CM Jayalalitha writes to CMs on Centre's transferring AI-India service officers, ignoring State's priorities • PMO denies officials' involvement in UTI's investment in Cyberspace Infosys, the Lucknow company which defrauded the public.

August

Milkha Singh Rejects Arjuna Award

UTI US-64 scheme's repurchase for small investors begins • Five-time National Champion Bhagyashree Thipsay wins 28th National Women's 'B' Class Championship.

India Post launches e-post • Adjournment motion by Opposition on the UTI muddle defeated • Puella Gopichand to receive Rajiv Gandhi Khel Ratna award • SC ruling that convicted persons should not hold office till their names were cleared.

03 An Additional DGP of Punjab gets life term for murder of a businessman • Railway concession to senior citizens made optional • All issues relating to UTI to be considered by JPC on stock scam.

05 Ten (8CRPF jawans) killed in landmine blast in Assam, suspected to be planted by NDFB militants.

06 27 mentally ill persons killed in a fire in an asylum at Erwadi, T. Nadu.

07 Militants kill five persons at Jammu rail-

way station • Certain drugs used in the treatment of HIV/AIDS exempted from customs and excise duties • Govt. to allot the 6000 Internet kiosks to unemployed persons only • Controversy over Govt.'s decision to include the 'child prodigy' Thataghat Avatar Tulsi of Patna in the delegation of young scientists who were sent to Germany in June for an interaction with Nobel laureates in Physics • Rubber prices touch a four-year high at Rs 38 per kg for RSS4 • Standard & Poor's downgrades India rating.

08 Controversy over the hanging in public of two Muzaffarnagar (UP) lovers Vishal and Sonu belonging to different castes • USA restores duty-free benefits to India on 42 products including jewellery, leather and carpets • Cabinet approves commencement of Pradhan Mantri Gram Sadak Yojna (PMGSY) as a 100% Centrally-sponsored scheme • GSI D-G Ravi Shankar calls for creation of a Ministry of Earth Sciences • Chhattisgarh HC bans the use of national symbol of Ashoka Chakra for sealing liquor bottles sold in state-owned shops.

09 Home Minister Advani unveils new plan to meet the terror challenge in J&K • Credit rating agency Moody's lowers India's foreign currency outlook.

10 Railway stations to host ATMS • Scientists are still clueless on Kerala's red rains and other phenomena.

11 UP's Loktantrik Congress Party splits, Energy minister Naresh Agrawal expelled • W. Bengal Govt. not to allow courses in astrology • Reports say PM and Home Minister are on Pak-backed terrorists' hit list • suicide squad despatched to Delhi to disrupt Aug. 15 celebrations.

13 Govt. gives extension to some of the BSRBs beyond July 31 deadline • SC notice to Centre & AP on a petition filed by Karnataka seeking a direction to AP not to go ahead with Telugu Ganga and Srisailem projects utilising surplus water of the Krishna • Former junior national tennis player S. Kartik Raj (kidnapped) killed by abductors • Railways inform Kerala HC that the Gurudev Express and Amritha Express were not named after any individual—'Gurudev', as a respect to the preceptors or acharyas, and 'Amritha' after the Sanskrit word Amritham (nectar or elixir) • 10 countries including Russia and France publicly express support for India's

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candidature for permanent membership of UN Security Council.

14 Lokpal Bill introduced in LS for the eighth time.

15 Krushi Cooperative Union Bank, Secunderabad in trouble • Independence Day celebrated in Delhi, where PM addresses the nation.

16 Milkha Singh rejects Arjuna award • PM Vajpayee says India has arrived at a broad framework with Pakistan to continue the dialogue, adding that Pakistan would not raise Kashmir issue in international conferences • Explosion in State-owned explosives factory at Christianpet near Katpadi (T-Nadu) kills 22 persons • LS passes bill empowering Pondicherry and Delhi to borrow from the market.

17 In Assam, P.K. Mahanta, AGP supremo, hands over charge after a scandal about his 'extramarital relationship' • SC rules that no one can be a minister for more than six consecutive months without becoming a member of the Legislature concerned during the term of that Assembly • Centre-State relationship is not a 'master-slave' relationship, says Jayalalitha who turns down Centre's request to relieve 3 IPS officers • Bill on MPs' salary hike cleared—salary to be tripled to Rs. 12000 • BIFR to be wound up, company Law to take its place.

reserves that foodgrains overflowing • Cyclone godowns must reach the starving people and not be wasted by being dumped in the sea or eaten by rats • Naxalites kill 10 policemen in Guntur blast.

21 US Patents and Trademarks Office upholds the Texas-based rice breeder RiceTec Inc's controversial patent on 'superior' strains of basmati rice • Pusa Rice Hybrid-10, a hybrid basmati rice developed by IARI released for commercial seed production, making India the first country to develop a hybrid strain of basmati.

22 Lok Sabha session disrupted by scenes on the alleged use of women as 'honey traps' by tehelka.com in its bid to expose corruption in defence deals.

23 Home Ministry to enquire whether the news portal tehelka.com had violated the law in conducting its sting operation • Arafat in India, in the context of India being asked by the two West Asian adversaries to revive their peace talks • All-party meeting

convened by LS Speaker decides to penalise members moving to the well of the House.

24 Samata Party and BJP rally for legal action against Tehelka.

26 Weightlifter Kunjarani Devi tests positive for a banned drug, suspended from intl. events for six months • Forex reserves rise to \$44,590 b.

27 Trinamool Congress and PMK are back in National Democratic Alliance • India declines to equate Zionism with racism – a position to be taken at the UN meet on racism at Durban • NHRC asks Orissa govt. to prevent starvation deaths.

29 Railway fares to be hiked from Oct.1 to facilitate faster modernisation of its over-aged assets to ensure greater safety • Koneru Humpy wins World junior girls' chess championship in Athens.

30 Govt. to set up Defence Acquisition Council (DAC), with a Defence Procurement Board, a Defence Production Brand and a Defence Research and Development Brand under it • Parliament approves Indian Divorce (Amendment) Bill 2000 to give Christian women right to seek marriage annulment • Manipur women resent directive by underground outfit KYKL (Kangjamba) asking women not to wear saree, salwar and trousers • Country's first Cyber Crime Police Station set up at Bangalore.

31 Orissa govt claims there were no starvation deaths in Kashipur block (Rayagada dist.).

September

Starvation Deaths in Orissa?

01 National Conference and UDF of Meghalaya join Congress and Left parties in rejecting BJP-led NDA govt's attempts to 'saffronise' education • (net changes: six new faces - five exit) two promoted-now cabinet is 76 strong • Hurriyat leader Yaseen Malik allowed abroad for two months • NDC appr 10th plan approach paper aimed at 8 cent growth • Deadline for women in Kashmir Valley to wear burqa extended 10 days by militant outfit Lashkar-e-Jab • SC pulls up several States for starvation deaths • SC issues notices to HRD min and UGC on petition about astrology course in

- tax payers in India to increase from 25m. assesses to 35m. by end of the fiscal year.
- 04** Manipur Assembly to be dissolved • In Assam, P.K. Mahanta quits as AGP chief—a sequel to controversy over his alleged 'second marriage'.
- 06** SEBI comes out with a six-point strategy to check scams • SC observes that constitution is supreme, and the 'will' of the people must stand subordinate to it • Orissa CM says there were no starvation deaths in Kashipur. The 20 deaths in July-Aug. were due to food poisoning • Brindaban Goswami is new AGP President (Assam).
- 07** A course on astrology introduced in Vikram University of Ujjain (MP)
- 08** Kashmir's Laskar-e-Jabbar asks non-Muslim women to adopt a new dress code so that they are spared from the 'action' to be taken against Muslim women not observing 'purdah' after Sept.
- 09** CII projects a 5.25 per cent growth for current fiscal • Record procurement during recent years increases stocks of foodgrains from 200 lakh MT in Jan.'97 to 616 lakh MT in July, 2001
- 10** Rupee dips to an all time low of Rs. 47.35 a dollar.
- 11** Manipur Assembly, under suspended animation since early June, dissolved • Sensex hits 32-month low at 3150.
- 12** SC says Sonia Gandhi is an Indian citizen.
- 13** Sensex yields 45 points to dip below 3000 at 2987.50 • 250 Indians feared missing following terrorist attacks on WTC, New York. India ups its level of support to the anticipated US action against Afghanistan. Sensex touches 2681, an 8-year low. By-elections for 2 LS and 7 Assembly seats • 'Food Parks' (food processing units) to be set up in Himachal Pradesh. RBI hikes investment limit in companies for FII's • SC directs States & UTs to strictly implement provisions of Pre-Natal Diagnostic Techniques Act and to prosecute those aiding identification of sex foetus illegally • ADB approves \$240m. loan for India's road system • Jharkhand approves 73p.c. reservation for SC, ST and Backward Castes in Govt. jobs • Senates of all 6 varsities in Karnataka abolished w.e.f. Sept. 13 when Karnataka Universities Act come into force • Puri Sankaracharya says temples should be opened to non-Hindus.
- 21** Sensex plunges to 2600 losing 23 points in a week, one of the lowest in past eight years.
- 23** M.P. Govt. to set up a tribal museum in Bhopal • Centre to finance Bangalore's Metro Rail Project • Karimnagar Zilla Parishad passes resolution favouring statehood for Telengana, amid protest from TDP & BJP members.
- 24** Chennai rocked by an earthquake (5.6)
- 25** Light tremors (5.6) in T.Nadu, Karnataka and A.P. • Medha Patkar's hunger strike at Azad Maidan (Mumbai) enters 9th day, as Maharashtra govt. decides to convert 73 forest villages into revenue villages to help Sardar Sarovar displaced people secure land titles • A.P. High court allows Vengaboys show.
- 26** Roorkee 'varsity' made IIT • Intl. Film Festival of India scheduled for Oct. cancelled.
- 27** Centre bans radical Students Islamic Movement of India (SIMI) • Medha Patkar ends 11-day hunger strike following assurance on rehabilitation of Sardar Sarovar Project oustees.
- 28** Centre moves to exit Maruti, and Maruti plans entering insurance • SC says amounts paid by in-laws to husband cannot be termed as dowry unless such payments are made in connection with the marriage • Centre says SIMI had links with Al Qaeda.
- 29** Jagmohan Dalmiya is new BCCI President • Record Kharif output of 105.6m tonnes expected this year • World Bank clears \$913.8m. loan for India
- 30** Madhavrao Scindia, deputy LS leader of Congress, former Union Minister and a senior-most congressman dies, in the crash of a 10-seater cessna aircraft near Motta, with seven others including four journalists.

October

Militants storm J&K Assembly

- 01** IA to levy insurance surcharge of Rs. 100 per sector of travel • Suicide squad storms J&K Assembly, gunbattle follows, 31 killed—Jaish-e-Mohammad claims responsibility • Rupee is 47.98 against dollar • Indians killed in WTC attacks put at 250.
- 04** BJP General Secretary Narendra Modi asked to form new Govt. in Gujarat after Keshubhai Patel resigns.
- 05** Centre decides to sell its majority stake in

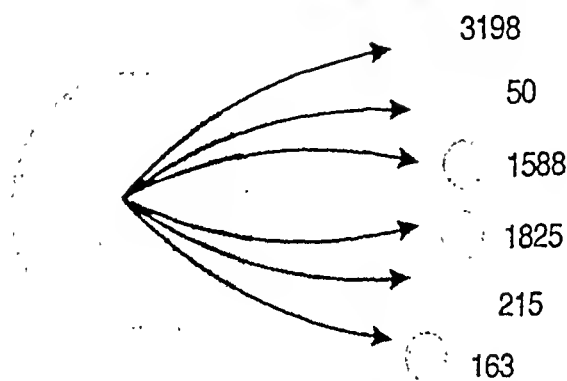
- CMC&HTL, amounting to Rs. 207cr.
- 07** VHP opposes demand for ban on Bajrang Dal • In Srinagar, the rebuilt Charar-e-Sharief shrine is opened • Narendra Modi sworn in CM of Gujarat.
- 08** Rupee at record low of 48.1250 against US\$.
- 11** Year-long Jaiprakash Narain birth centenary celebrations begin • HLL to issue bonus debentures—the first time in India.
- 12** Bandh in Srinagar and Delhi protesting US attacks in Afghanistan • Venkataswami Commission says the Tehelka tapes are genuine • India wants Dawood Ibrahim's name to be included in US list of 22 most wanted suspected terrorists • Air India shuts down 20 foreign stations.
- 13** It is reported that a genetically modified variety of cotton has been illegally cultivated on about 10,000 hectares in Gujarat • Plot by underworld Abu Salem gang to kill film star Aamir Khan and three others foiled.
- 14** Adivasi-Dalit Action Council Chairperson CK Janu threatens to go on fast unto death to intensify the stir for cultivable land in Kerala's Wayanad district.
- 15** George Fernandes, who resigned after Tehelka incident seven months ago, is back in Cabinet as Defence Minister, and Harin Pathak is inducted as Minister of St. for Defence. Congress President calls reinduction 'shameful' • Indian troops shell Pak posts in Mendhar and Akhnor sectors of J&K, after 10-month lull • Kerala to distribute 1046 acres of excess land • SC says States and Varsitys cannot dilute standard set by Medical Council of India • Pak President says Kashmir is at the heart of Indo-Pak tensions.
- 16** 48-day Adivasi agitation under C.K. Janu in Trivandrum ends with an agreement that would provide land to all landless Adivasis in Kerala • Colin Powell, U.S Sec. of St., in Delhi • National Commission for SC&T directs Chhattisgarh govt. to cancel the ST certificate obtained by CM Ajit Jogi.
- 17** Sensex crosses 3000-mark • VHP leaders force entry into disputed site in Ayodhya • VHP activists storm the makeshift temple at Ayodhya.
- 18** US-based Carnegie Mellon 'Varsity to pull out from India's Rs. 1000cr. Sankhya Vahini • Heavy exchange of fire along LoC • SC says ownership of a deceased husband's property vests in his widow as she succeeds him as heir.
- 19** Govt. to go ahead with Sankhya Vahini project • N. Rangaswamy to be new Pondicherry CM.
- 21** Naxalites blast some units of Coca Cola bottling plant at Atmakur (A.P) • India wins the world junior hockey championship at Hobart • AIADMK leads in T. Nadu municipal elections.
- 22** RBI (in mid-term review of monetary policy) marks down Bank Rate to 6.5 (from 7 per cent) and CRR to 5.5 (from 7.5%) in two stages • ISRO's PSLV (PSLV-C3) launches three satellites into orbit • Chhattisgarh HC stays the implementation of NC for SC& T's order dismissing CM Ajit Jogi's claim to be a tribal • Suicide of 12 farmers in the past year reported in Kerala's Palakkad district, resulting from crash in prices of paddy and other commercial crops.
- 23** Japan to lift sanctions on India • Govt. to sell six ITDC hotels • Cabinet okays sell-off of HZL, ITDC and HCI.
- 24** Indo-Tibetan Border Police celebrates its 40th Raising Day • Win Chadha, key accused in Bofors payoff case, dies • Ordinance to counter terrorism (POTO), considered tougher than TADA, gets presidential clearance.
- 27** Communal violence in Malegaon.
- 28** German Chancellor Gerhard Schroeder in Delhi.
- 29** Uttaranchal CM Nityanand Swami resigns • Bhagat Singh Koshiari elected Uttaranchal CM • Centre decides to switch over from a secret to an open ballot for elections for Rajya Sabha.
- 31** Koneru Humpy wins the 3rd Saturday GM chess tournament.

November

No Smoking in Public Places

- 01** S.P. Bharucha is the new CJI • P.T. Usha conferred honorary doctorate by Kannur University.
- 02** SC bans smoking in public places • Govt. says POTO (Prevention of Terrorism Ordinance) is superior to TADA.
- 04** *Lagaan* nominated as India's entry for Os-

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 Chairperson, National Commission for Women: Ms. Vibha Parthasarathy
 Chief of Integrated Defence Staff: Lt. Gen. Pankaj Joshi
 CMD, IDBI: Mr. P.P. Vohra
 Director, CBI: Mr. P.C. Sharma
 Director, Intelligence Bureau: Mr. K.P. Singh
 Director, NCERT: Prof. J.S. Rajput
 Director, Press Institute of India: Mr. Ajit Bhattacharjee
 Director, Research and Analysis Wing: Mr. V.K. Sood
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 D-G, CSIR: Mr. R. A. Mashelkar
 D-G, ICMR: Prof. N.K. Ganguly
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 Ambassador to China: Mr. Shivshankar Menon
 Ambassador to Germany: Mr. Ronnen Sen
 High Commissioner to UK: Mr. Nareshwar Dayal
 India's Permanent Representative to the UN: Mr. Kamallesh Sharma

Obituary 2001

World

January

14. Fali Billimoria, 78, documentary film maker.

February

7. Anne Lindbergh, writer, copilot and widow of aviation pioneer Charles Lindbergh. 19. Charles Trenet, 87, France's celebrated 'Singing Madman', entertainer for over half a century; Stanley Kramer, 87, Hollywood Director. 21. Dr. William H. Masters, 85, sex therapy pioneer. 24. Dr. Claude Simmon, 84, mathematical engineer who first conceived the idea that all information could be reduced to a stream of ones and zeroes. 25. Sir Donald Bradman, 92, Australian cricketer, who amassed 6996 runs at an average of 99.94. 28. Gin Kanie, 108, one of the twin sisters to become famous as Japanese centenarians.

March

4. Harold Stassen, 93, who was governor of Minnesota at 31 and tried on nine occasions, without success, to become US President. 15. Robert Ludlum, 73, writer of thrillers. *The Bourne* trilogy. 18. Leopold Page, 87, Holocaust survivor whose zeal led to publication of *Schindler's List*. 21. Chung Ju-Yung, 85, founding chairman of Hyundai group of S. Korea. 22. William Hanna, 90, animation legend. 24. David McTaggart, 69, Canadian co-founder of environmental pressure group 'Greenpeace'.

April

1. John Lewis, 80, jazz pianist. 16. Mullah Mohammad Rabbani, deputy of the Taliban. 21. Jack Haley Jr., 67, Hollywood producer, actor, writer, former husband of Liza Minnelli. 29. Babu Tshering of Nepal, who climbed Everest 11 times.

May

9. Nicos Sampson, 66, President of Cyprus for eight days. 17. F.J. Khergamvala, 54, journalist covering international affairs, former IFS officer. 18. Sean MacStoifain, 73, provisional IRA's chief of staff. 26. Albert Korda, 73, renowned Cuban photographer.

June

1. King Birendra, 55, Queen Aishwarya, 51, and six other members of the royal family (assassinated); Nkosi Johnson, 12, AIDS activist, a potent symbol after being labelled the longest living AIDS child. 2. Henry 'Hank' Ketcham, 81, creator of *Dennis the Menace*. 3. Anthony Quinn, 86, Oscar winning actor (*Zorba the Greek*, *Lawrence of Arabia*). 4. King Dipendra, 29, King of Nepal for 3 days (declared king while battling for life). 5. K.T. Li, 91, Taiwan's father of technology, one of the architects of island's economic development. 10. Princess Leila Pahlavi, 31, daughter of the late Shah of Iran. 12. Chenjerai Hunzvi, 51, of Zimbabwe, who spearheaded the violent occupation of hundreds of white-owned farms in 2000, nickname, Hitler. 28. Jack Lemmon, 76, American actor. Two Oscars. 50 year film career. *Some Like it Hot*, *The Apartment*.

July

3. Baharuddin Lopa, 66, Attorney-General, Indonesia. 5. Mrs. Hannelore Kohl, 68, wife of former German Chancellor Kohl (suicide). 15. Uzaemon Ichimura, 84, Kabuki artist. 18. Mrs. Katherine Graham, 84, chief of *Washington Post*, who relentlessly pursued the Watergate scandal; Christ Has, 57, Austrian skiing champion. 20. Roy Gilchrist, 67, W. Indian cricketer who was the fastest bowler of his time. 23. Eudora Welty, 92, American writer of the so-called Southern School.

August

6. Jorge Amado, 88, Brazilian author; Dame Dorothy Tutin, 70, British stage and screen actress. 9. Maureen Reagan, 60, Ronald Reagan's daughter. 17. Richard Chelimo, 29, Kenya's former 10,000m. World record holder. 20. Donald Woods, 67, S. African anti-apartheid newspaper editor; Fred Hoyle, renowned astrophysicist. 30. Govan Mbeki, 91, great leader of the liberation struggle in S. Africa, father of President Thabo Mbeki.

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April

6. Devi, Lal, 87, former Deputy PM. 7. G.N. Ramachandran, 79, scientist. 8. Behram Contractor, 70, journalist known as 'Busy Bee'. 12. Dewang Mehta, 38, NASSCOM chairman and 'software evangelist'. 17. Sadiq Ali, 93, Gandhian and former Governor of T.Nadu and Maharashtra. 23. Jayantrao Tilak, 80, Parliamentarian, grandson of 'Lokmanya' Tilak. 24. Shailesh Matiyani, 70, Hindi fiction writer. 26. Ms Chaya Devi, 80, romantic heroine of yesteryears. Over 150 films.

May

8. Prem Dhawan, 78, film lyricist, *Ae Mere Pyare Watan*. 12. R.K. Narayan, 94, outstanding Indo-English writer, the master story teller famous for *Malgudi Days*, brother of cartoonist K K Laxman. 14. Didi, 71, footballer. 25. Vishwasrao (Babu Kunte), 93, Marathi actor and social worker. 26. Jagdish Gupta, 76, Hindi litterateur.

June

3. Shivraya Dungappa Shiroom, 98, freedom fighter, follower of Gandhiji and BR Ambedkar. 5. P.P. Vaidyanathan, 77, creator of famous jingles for various products; 17. Mohammad Yunus, 85, diplomat, former chairman of TFAI, nephew of Frontier Gandhi. 18. M. Hanumantha Rao, 84, senior Marxist leader. 19. C.R. Pattabhi Raman, 94, former Union Minister; Donald Cram, 82, Nobel prize-winning chemist. 20. Pallavur Manian Marar, 60, panchavadyam artiste; 21. K.V. Mahadevan, 83, music-director. 22. Dr. Arun Ghosh, 78, economist, formerly India's Dy. Director at IMF. 24. A.S. Raman, 82, writer and former editor of *Illustrated Weekly of India*. 26. G. Ramanujam, 86, former Governor of Goa and Orissa and veteran trade union leader.

July

9. Victor George, 45, chief photographer, *Malayala Manorama*. 21. Shivaji Ganesan, 73, veteran actor. Over 300 films in 50 years. Padma Shri, Padmabhushan, Phalke award. 25. Phoolan Devi, 38, M.P and former 'Bandit Queen'.

August

1. Begum Kudsia Aizaz Rasul, 97, Congress leader and member of the constituent assembly. 6. Admiral A.K. Chatterji, 87, former Chief of Naval Staff. 30. G.K. Mooppanar, 70, veteran Congressman, TMC President, 'Kingmaker' in

Tamilnadu: A.P. Kurien, 70, former Kerala Speaker and CPI(M) leader.

September

3. Justice S. Rangarajan, 84, former Chairman of MRTP commission; 27. Kottla Vijaybhaskar Reddy, 81, Congress leader and former CM of A.P.; 30. Madhav Rao Scindia, 56, senior Congress leader and former Union Minister.

October

1. Sundranath Dwivedi, 89, freedom

fighter and former Arunachal Governor. 8. Sankarady, 77, Malayalam film actor, over 700 films. 24. Win Chadha, 77, Dubai-based businessman, key accused in Rs. 64 cr. Bofors payoff case. 27. Pradeep Kumar, 76, Hindi film actor, *Tajmahal*, *Anarkali*; Maragatham Chandrasekhar, 85, senior Congress leader from Tamil Nadu. 29. K.P. Ummer, 70, Malayalam actor. 31. B.K. Nehru, 92, diplomat, senior-most member of Nehru clan, former Governor of Gujarat.

Stop Press

Awards (contd. from page 470)

Nobel Prizes 2001- Medicine: Leland Hartwell (USA), and Timothy Hunt and Paul Nurse (both UK); **Physics:** Carl E. Wieman (USA); Eric A. Cornell (USA); Wolfgang Ketterle (Germany); **Chemistry:** William S. Knowles and K. Barry Sharpless (both U.S.) and Ryoji Noyori (Japan); **Economics:**

George A. Akerlof (USA), A. Michael Spence (USA) and Joseph E. Stiglitz (USA); **Literature:** V. S. Naipaul (Britain); **Peace:** Kofi Annan (Ghana), UN Secretary-General; **UN (jointly):** \$943,000.

Literature: Frankfurt E book award
Amitav Ghosh (*The Great Inland Sea*)
Non-fiction: Steven Leacock (*The Secret of Ezhuthachchan Parakkal*)

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Bel Prize Winners



J. J. Annan



V.S. Naipaul



Paul Nurse



Leland Hartwell



Timothy Hunt



Carl E. Wieman



Eric A. Cornell



Wolfgang Ketterle



William S. Knowles



Ryoji Noyori



K. Barry Sharpless

Vijayan, Rs.100,000; **Booker Prize:** Peter Carey (Australia) *True History of the Kelly Gang*, £21,000.

Music & Arts: Dada Sahab Phalke Award, 2000: Asha Bhonsle-Rs. 200,000; **MTV Awards:** Europe Music Award-Robbie Williams (Best male singer); Best female singer-Jennifer Lopez; Best R&B Award: David Craig; Best Group: Limp Bizkit; Best dance: Gorillaz.

Films: *Lagaan*-Oscar nomination

Emmy Awards (TV): *The West Wing* gets 8 awards including Best Drama series; Lead actor (drama) award-James Gandolfini (*The Sopranos*) Lead actress: Edie Falco; Lead actress (comedy series): Patricia Heaton (*Everybody Loves Raymond*)

Miscellaneous

Miss World: Agbani Darego (Nigeria).

30th Dhanwantri award: Dr. P.K. Warrier; **Rochdale Pioneers Prize** (Intl. Cooperative Alliance): V. Kurien; **Grand**

Prize (World Academy of Culture): Arundhati Roy, \$68, 500; **Aga Khan Award for Architecture 2001:** Chairman's award: Geoffrey Bawa, (Sri Lanka).

Deepalaya award: K.R. Meera, *Malay Manorama*.

Maha Vir Chakra: Captain Gurjir Singh Suri (posthumous).

Appointments

Afghanistan: Taliban Govt. ousted. **E**

gladesh: President: Badru-ddoza Chowdh

Bulgaria: President: Georgi Parvanov; **I**

Timor: Head of transitional govt: Alkatiri; **Norway:** PM: Stoltenberg resign

India-CM: Uttaranchal, Bhagatsi Koshiyari; **Chief of Naval Staff:** Mavendra Singh; **Chief of Air Staff:** nivasapuram Krishnaswamy.

Corrections: p186, col.2, para 4 line 6: Re: watts as 1000 watts.

Index

A

Abbreviations 456-465
 Abhimanyu 447
 Afghanistan 259
 Age, of the Universe 168
 Agriculture, Indian 34-42
 AIDS 232-233, 303
 Air Disasters 485
 Albania 260
 Algeria 260
 Al Qaeda 88
 Alternative Medicines
 510-513
 Alzheimer's Disease 238
 Andaman and Nicobar
 Islands 694-696
 Andhra Pradesh 630-633
 Andorra 261
 Angling 756
 Angola 261
 Animals, World of 211
 Annan, Kofi 102, 820
 Anniversaries,
 Wedding 482
 Antarctic Research
 594-597
 Anti-Dumping 572-576
 Antigua & Barbuda 262
 Argentina 262
 Arjuna 447
 Armenia 262
 Arroyo, Gloria 108
 Aruba 319
 Arunachal Pradesh 633
 ARPAnet 130
 Asian Games, Pusan
 740-742
 Assam 114, 635-637
 Asteroid 184-185
 Astronomy 165
 Athletics 704-710
 Atmosphere 197
 Atolls 195
 Australia 263
 Austria 264
 Awards and Honours
 470-478
 Azerbaijan 264

B

Bahamas, The 265
 Bahrain 265
 Balanced diet 217
 Bangladesh 265
 Barbados 267
 Basic First Aid 236-240
 Beauty Queens 481
 Belarus 267
 Belgium 267
 Belize 268
 Benin 268
 Berlusconi, Silvio 102
 Bharat Darshan, 514-524
 Bharat Ratna 470
 Bhutan 268 - 270
 Bihar 637-639
 Biodiversity and Species
 Extinction 256
 Biosphere 207-209
 Birendra, King 94
 Black hole 167
 Blair, Tony 106
 Blood and Blood Banks 240
 Bluetooth Revolution 143
 Body Statistics 220-221
 Bolivia 270
 Books 449-456
 Bosnia-Herzegovina 270
 Botswana 271
 Bradman, Donald 716
 Brazil 271
 Brunei 272
 Bubka, Sergei 705
 Budget 120, 540
 Budget at a Glance 540
 Bulgaria 102, 273
 Burkina Faso 273
 Burundi 273

C

Cambodia 274
 Cameroon 274
 Camp David 299
 Canada 183, 275
 Cancer 234
 Cape Verde 276

Carbohydrates 215
 Careers 382-403
 Caves 200
 Cen. African Republic 276
 Central Plan Outlay by
 Sectors 533
 Chad 276
 Chandigarh 696-697
 Chaudhry, Mahendra 289
 Chess 742-743
 Chhattisgarh 640-641
 Chief Election Commission
 ers 485
 Chief Justices 484
 Chief Ministers, Women
 483
 Chiefs of Air Staff 485
 Chiefs of Army Staff 485
 Chiefs of Naval Staff 485
 Chile 276
 China 183, 277
 Cholesterol 239
 Circulatory System 219
 Civil Services 386-403
 Climate 531
 Clothing sizes 249
 Coe, Sebastian 706-707
 Colombia 279
 Comets 177
 Comoros 279
 Computers 144-150
 Computer virus 151-154
 Constitution, India 548-
 563
 Congo 280, 281
 Congress Presidents 619
 Continental Drift 192
 Continents 199
 Cook Islands 320
 Coordinated Universal Time
 246
 Copyright 611
 Coral Islands 195
 Corruption 289
 Costa Rica 281
 Cote D' Ivoire 282
 Council, of Ministers 810
 Countries 258-359
 Biggest 258

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Flags 84-85
 Smallest 258
 Country Symbols 482
 Cricket 712-717
 Cricket, Family 720-721
 Cripps Mission 616,624
 Croatia 282
 Cuba 282
 Current Affairs, International 86-108
 Current Affairs, National 110-118
 Cyprus 283
 Czech Republic 284

D

Dadra and Nagar Haveli 697-698
 Daman and Diu 698-699
 Dams and Development 576-578
 Data Beams 149
 Deep-sea Trenches 201
 Defence 579-583
 Delhi 692-693
 Delphi 293
 Denmark 284
 Deserts 194, 200,530
 Desktop system 147
 Diabetes 237
 Digestive System 223
 Diseases- Deficiency 225
 Diseases-Infectious 225
 Djibouti 285
 Dominica 285
 Dominican Republic 286
 Drought in Iran 297

e-Education 139-140
 e-Governance 140-142
 Earth 190-201
 Earth Day 209
 Earthquake, Gujarat 110,128
 Earthquakes 202-205
 Ecuador 286
 Education 603-608
 Education & Career 382-403
 Egypt 286
 Elections, Assembly 112

El Salvador 287
 Emoticons 138
 ENIAC 134
 Enterprise Resource Planning 154-162
 Environment 589-592
 Environmental Conferences 209

Epidemiology 235
 Equatorial Guinea 287
 Eritrea 287
 Estonia 288
 Ethiopia 288
 Etiology 234
 Events-
 India 2001 780
 India 614-627
 World 2001 758-779
 Everest, garbage on 318
 External Sector, Indian 48-52

F

Fat 215
 Fernandez, George 124
 Fiji 98, 289
 Financial Sector, Indian 52-58
 Finland 289
 First Aid 236-237
 First Aid Kit 236
 First War of Independence 615,617
 Five Year Plans 58-60
 Flags 84-85
 Food and Nutrition 214-217
 Football 726-734
 Foreign Trade, Indian 46-48
 France 182, 290
 Futsal, Football of the Future 732-734

G

Gabon 290
 Galaxies 166
 Gambia, The 291
 Gandhi-Irwin Pact 623,626
 Gandhi, Mahatma 625,626
 Gardening 755
 Genoa 108
 Geology 541

Georgia 291
 Germany 291
 Ghana 292
 Glandular System 222
 Global Institutional Framework 70-72
 Globalisation 62-72
 Goa 641-643
 Greece 293
 Greeting People 482
 Grenada 293
 Group of Eight 108
 Guatemala 293
 Guinea 294
 Guinea-Bissau 294
 Gujarat 643-645
 Guyana 294

H

Haiti 295
 Ham Radio 755-756
 Harischandra 447
 Haryana 645-647
 Heads, Important Offices 814
 Health 613
 Heart Attack 239
 Height Chart 248
 High altitude sickness 159
 Himachal Pradesh 647-649
 Hindu Maha Sabha 622
 History 614-627
 HIV 232-233
 Hobbies 752-756
 Hockey 744-745
 Honduras 295
 Hong Kong 278
 Horticulture, India 568-570
 Human Body 218-224
 Human Disease 225
 Human Genome Project 211-213
 Humpy, Koneru 743
 Hungary 295
 Hydrosphere 195
 Hypertension 239

I

Iceland 296
 IFC-70
 IMF-70
 Important Days 467-468

Index 824-832
 India 183, 296, 525-702
 Climate 531
 Constitution 548-563
 Current Affairs 110-118
 Economic Devt. and
 Population Growth 78-82
 Economy 32-60
 Facts & Figures 480, 628-
 629
 Foreign Trade 46-48
 History 614-627
 IT Sector 52
 Languages 544-546
 National Insignia 531
 People 542-543
 Population 72-76
 Rivers 530-531
 States & Territories
 628-702
 Turbulent
 Neighbourhood 378-380
 Watersheds 530
 Indian National Congress
 618
 Indian Nobel Laureates 477
 Indo-Anglian writing 604
 Indians Abroad 373-377
 Indonesia 98, 296
 Industry, Indian 42-46
 Intellectual Property Rights
 533-539
 International Organisations
 366-370
 International Units
 253-255
 Internet 130
 Internet Country Codes 135
 Internet Domains 132
 Internet Enabling
 Technologies 133-138
 Internet Guide 612
 Internet lingo 136
 InterplanET 133
 Inventions and Discoveries
 241-245
 Iran 108, 297
 Iraq 298
 IRA 299
 Ireland 298
 Islands 195, 200
 Israel 100, 299
 Italy 102, 300
 Ivory Coast 282

J
 Jallianwallabagh 621
 Jamaica 301
 Jammu & Kashmir 649-651
 Japan 183, 301
 Jayalalitha 114, 126
 Jharkhand 651-653
 Johnson, Michael 704-705
 Jordan 302
 Joyner, Florence
 Griffith 708

K
 Kashmir 124
 Kazakhstan 303
 Kenya 303
 Kerala 656-658
 Khadi 622
 Khaleda Zia 96
 Khatami 108
 Khilafat movement 616, 622
 Kiribati 304
 Koen, Fanny Blankers 708
 Korea (North) 304
 Korea (South) 305
 Kuiper Belt Objects 173
 Kumaratunga, Chandrika
 100
 Kuwait 305
 Kyoto Protocol 104
 Kyrgyzstan 306

L
 Lakes 199
 Lakshadweep 699-701
 Languages, India 544-546
 Languages, World 371-372
 Laos 306
 Latvia 306
 Lebanon 307
 Lesotho 307
 Lewis, Carl 704
 Liberia 307
 Libya 100, 308
 Liechtenstein 308
 Lithosphere 191
 Light Combat Aircraft 120
 Lightning 186-189
 Lithuania 308
 Livestock, India 570-571
 Lockerbie 100

Logic bombs 153
 Luxembourg 309

M
 Macao 279
 Macedonia 309
 Madagascar 310
 Madhya Pradesh 640,
 658-661
 Maharashtra 661-663
 Malawi 310
 Malaysia 310
 Maldives 311
 Male Menopause 162
 Mali 312
 Malta 312
 Manipur 118, 664-665
 Map, India 534
 Maria of Moon 176
 Marshall Islands 312
 Matter Facts 250
 Mauritania 313
 Mauritius 313
 Media 608-611
 Medicine in the 20th
 Century 226-228
 Medicine, Alternative
 510-513
 Medicine, Milestones in
 244-245-
 Medicine, World of
 228-232
 Megawati 98
 Meghalaya 665-666
 Melting Point 250
 Menopause 162
 Meteors 177
 Metric System 253
 Mexico 313
 Micronesia 314
 Milky Way 166
 MILNET 130
 Milosevic, Slobodan 104
 MIR 178
 Mizoram 666-668
 Moldova 314
 Monaco 314
 Mongolia 315
 Monsoon 198
 Moon 176
 Moore's Law 158
 Montague-Chelmsford
 Reforms 616

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Morley-Minto Reforms 620
 Morocco 315
 Moses, Edwin 705-706
 Mountains 194
 Mountbatten, Lord 625, 626
 Mozambique 316
 Muscles 222
 Musharat, Pervez 90
 Myanmar 316
 Mythological Characters
 447-448

N

Nagaland 118, 668-670
 Names, Old and New 469
 Namibia 317
 Naoroji, Dadabhai 620
 National-
 Anthem 532
 Animal 533
 Bird 533
 Calendar 533
 Emblem 531
 Flag 531
 Flower 533
 Song 532-533
 Nations 258-359
 Biggest 258
 Flags 84-85
 Smallest 258
 National Days 466
 Nauru 317
 Navarasa 413
 Navaratna 413
 Nepal 94, 318
 Nervous System 223
 Netherlands, The 319
 Netherlands Antilles 320
 Networking 150
 Newspapers 608-610
 Newton's Laws 250
 New Zealand 320
 Nicaragua 320
 Niger 321
 Nigeria 321
 Nitrogen Fixation 160
 Niue 320
 Nobel Prizes 477
 No. of days as PM 484
 Noise Scale 248
 Norway 321
 Novae and supernovae 167
 NRI Remittances 49

Nuclear Research and
 Development 583-585
 Numerals 250-253
 Numismatics 754-755
 Nurmi, Paavo 706

O

Obituary 2001
 India 820
 World 818
 Oceans 196
 Olympiad, Physics 296
 Olympic Games 736-738
 Oman 322
 Oort Cloud 173
 Orissa 670-673
 Organisations, Interna-
 tional 366-370
 Osama bin Laden 88
 Oscar Awards 471
 Outer space 164
 Oven temperatures 249
 Owens, Jesse 706
 Oxygen Therapy 160
 Ozone Layer 206

P

Padma Bhushan 470
 Padma Shri 471
 Padma Vibhushan 470
 Pakistan 90, 323
 Palau 324
 Palestine 324
 Panama 325
 Panchatantra 414
 Pancerselvam 112, 114
 Papua New Guinea 326
 Paraguay 326
 Partition 618, 624
 Peaks 201
 Peninsulas 200
 People, India 542-543
 Perce, Marie Jose 708
 Peru 327
 Philately 752-754
 Philippines 108, 327
 Physics, Olympiad 296
 Planets 175
 Planet names 175
 Plans and Planning 563-568
 Plants, World of 210-211
 Plate Tectonics 193

Plays, Shakespeare 481
 Poland 328
 PLO 299, 324
 Pondicherry 114, 701-702
 Population, Indian 72-82
 Population, Trends 370
 Portugal 328
 Poverty, India 566
 Presidents & Vice
 Presidents, US 480
 Presidents, India 484
 Prime Ministers, India 484
 Prime Ministers, UK 480
 Proteins 214-215
 Punjab 673-676

Q

Qatar 329
 Quiz-2002 486-509

R

Racial violence, UK 100
 Radioactive contamination
 159
 Railway highest 479
 Rajasthan 676-678
 Ranji Trophy 721-722
 Records 478-480, 718-720
 Red Giants 167
 Religions-
 India 547
 World 371
 Reproductive System 224
 Respiratory System 219
 Review, India 2001 120-128
 Richter Scale 205
 Rivers 196, 199, 530-531
 Rivers, cities 482
 Romania 329
 Round Table Conference
 623, 624
 Rowlett Act 621
 Russia 330
 Rwanda 331

S

Samoa 332
 San Marino 332
 Sao Tome & Principe 333
 Saudi Arabia 333
 Science 156-256

852 index

Science Scan 156-162

Search Engines 132

Seas 199

Senegal 333

Sepoy mutiny 612

Servers 131, 148

Seven Wonders of Today
469

Seychelles 334

Shakespeare, plays 481

Sharon, Ariel 100

Sierra Leone 334

Sikkim 678-679

Simeon II 102

Simputer 161

Singapore 335

Skeleton 218

Slovakia 335

Slovenia 336

Smoking 239

Snippets, Cricket 718

Sobriquets 468

Software Careers 382-385

Solar Storms 206

Solar system 172-177

Solomon Islands 336

Somalia 336

South Africa 337

South China Sea 104

Space Exploration 179-183

Space Research 585-589

Space Stations 181

Spain 338

Speakers, Lok Sabha 484

Speed conversion 249

Sports 704 - 750

Miscellany 745

Titbits 750

Sri Lanka 98, 338

States & Territories 628-702

St. Kitts-Nevis 340

St. Lucia 340

St. Vincent & The

Grenadines 341

Stars 167

Stemcell research 480

Stop Press 821

Sudan 341

Sun 173-175

Super computer 157

Suriname 341

Swadeshi movement 618

Swarajya Party 616, 622

Swaziland 342

Sweden 342

Switzerland 342

Syria 343

Taiwan 344

Tajikistan 344

Tamil Nadu 114, 679-683

Tanzania 345

TB Epidemic in India 235

Teeth 223

Tehelka 116, 122

Telecommunications 593-
594

Temperature Scales 249

Tendulkar, Sachin 717

Tennis 722-725

Thailand 345

Thorpe, Jim 706

Thunderstorms, Guidelines
for 189

Time Chart 247

Time Standards 246-247

Tito, Dennis 183

Tobacco 234

Togo 346

Tokelau 320

Tonga 346

Tourism 601-603

Tourist Destinations, India
514-524

Transport 598-600

Trenches, Deep-sea 201

Trinidad & Tobago 347

Tripura 683-684

Tunisia 347

Turkey 347

Turkish Cyprus 284

Turkmenistan 348

Tuvalu 349

U

Uganda 349

UK 100, 106

Ukraine 349

United Arab Emirates 350

UN 102

UN Conference on Racism
106

United Kingdom 350

United States of America
353

Universe 163-171

Urinary System 222

Uruguay 355

UTI 118, 122

Uttar Pradesh 685-688

Uttaranchal 684-685

Uzbekistan 355

V

Vanuatu 356

Venezuela 356

Venter, Craig 212

Vice-Presidents 484

Vietnam 357

Virtual Reality 138

Viruses 151-153

Vitamins and Minerals
215-217

Volcanoes 205

W

Wahid, Abdurahman 98

Waterfalls 200

Watersheds 530

Well-Known Books 449

Worms 153

Walsh, Courtney 716-717

Weight Chart 248

West Bengal 688-692

What is What 406-416

Where they Rest 482

Who is Who 416-447

Windows XP 161

Women Rulers 483

World Athletic Meet,
Edmonton 710

World Bank group-70

World Cup, 2002 728-730

World Cup, 2006 730-732

World Trade Centre 86

Y

Yemen 357

Yugoslavia 104, 358

Z

Zaire 280

Zambia 359

Zimbabwe 359

Zeolite-A 162

